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Mathematical Reviews

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Zolotarev, V. M. Properties and relations of certain types of metrics. (Russian. English summary) **81a:60008**

secondary classifications:

Choksi, J. R. (*with* Fremlin, David H.) Completion regular measures on product spaces. **(81m:28004)**

Fremlin, David H. *See* **Choksi, J. R., (81m:28004)**

Maeda, Michie Some remarks on type $(\tau, 1)$-cylindrical measures. **(81e:28009)**

Matsuzaki, Nagi On the joint measurability of the parametric Markovian transformations. **(81k:28017)**

Štěpán, Josef Probability measures with given expectations. **(81h:46008)**

60B10 Convergence of probability measures

Bergström, H. Representation of infinitely divisible probability measures in l^2 and some of its subspaces. **81d:60003**

Daffer, Peter Z. *See* **Taylor, Robert Lee, 81h:60007**

Dellacherie, C. Convergence en probabilité et topologie de Baxter-Chacon. **81m:60010**

Guilbart, C. Produits scalaires sur l'espace des mesures. (English summary) **81j:60006**

Jacob, Pierre Convergence uniforme à distance finie de mesures signées. **81f:60006**

Kučkarov, Ja. H. A problem of the convergence of moments for distributions with values in spaces of measurable functions. (Russian) **81j:60007**

Meyer, P. A. Convergence faible et compacité des temps d'arrêt d'après Baxter et Chacon. **81m:60009**

Pollard, David Induced weak convergence and random measures. **81j:60008**

Weak convergence on nonseparable metric spaces. **81a:60009**

Rebolledo, Rolando La méthode des martingales appliquée à l'étude de la convergence en loi de processus. **81g:60002**

Taylor, Robert Lee (*with* Daffer, Peter Z.) Convergence of weighted sums of random elements in $D[0, 1]$. **81h:60007**

secondary classifications:

Banis, R. The convergence of superpositions of integer-valued random measures. (Russian. Latvian and English summaries) **(81a:60063)**

Limit theorems for superpositions of multidimensional integer-valued random processes. (Russian. Latvian and English summaries) **(81a:60064)**

Dudley, R. M. Central limit theorems for empirical measures. **(81k:60029a)**

Corrections to: "Central limit theorems for empirical measures". **(81k:60029b)**

Jain, Naresh C. (*with* Orey, Steven) Vague convergence of sums of independent random variables. **(81f:60032)**

Kukuš, O. G. Weak convergence of measures and convergence of moments. (Russian) **(81d:28006)**

On the question of unique reconstruction of a measure from its values on spheres. Weak convergence of measures and convergence of integrals of norms. (Russian. English summary) **(81m:60008)**

Orey, Steven *See* **Jain, Naresh C., (81f:60032)**

Račev, S. The Hausdorff metric structure in the space of probability measures. (Russian. English summary) **(81a:60007)**

Richardson, Gary D. Applications of convergence spaces. **(81d:54001)**

Sen, Pranab Kumar (*with* Tsong, Y.) On functional central limit theorems for certain continuous time parameter stochastic processes. **(81m:60052)**

Tsong, Y. *See* **Sen, Pranab Kumar, (81m:60052)**

Whitt, Ward Some useful functions for functional limit theorems. **(81e:60035)**

Zapała, Michał August The Erdős-Rényi law of large numbers for a sequence of Wiener processes. (Russian summary) **(81f:60014)**

Zolotarev, V. M. Properties and relations of certain types of metrics. (Russian. English summary) **(81a:60008)**

60B11 Probability theory on linear topological spaces [See also 28C20.]

de Acosta, Alejandro (*with* Samur, Jorge D.) Infinitely divisible probability measures and the converse Kolmogorov inequality in Banach spaces. **81d:60004**

Exponential moments of vector-valued random series and triangular arrays. **81g:60003**

Badrikian, Albert Les fonctions semi-continues inférieurement et la théorie des mesures cylindriques. **81i:60005**

Berlinet, Alain Variables aléatoires à valeurs dans les espaces autoreproduisants et mesure empirique. (English summary) **81f:60007**

Chevet, Simone Séries de variables aléatoires gaussiennes à valeurs dans $E \hat{\otimes}_\varepsilon F$. Application aux produits d'espaces de Wiener abstraits. **81g:60004**

Quelques nouveaux résultats sur les mesures cylindriques. **81h:60008**

Chung, Dong M. On a class of symmetric stable probability measures on separable Fréchet spaces. **81h:60009**

Đặng Hùng Thắng (*with* Nguen Zuĭ Tien) On symmetric stable measures on spaces l_p $(1 < p < +\infty)$. (Russian summary) **81f:60008**

Èrgenlidze, Z. A. Lévy measures and Gaussian covariances. (Russian. Georgian and English summaries) **81c:60003**

Hamedani, G. G. (*with* Mandrekar, V.) Lévy-Khinchine representation and Banach spaces of type and cotype. **81g:60005**

Hsü, Shih Hslung *See* **Puri, Madan Lal, 81h:60011**

Ibragimov, I. A. The probability of a Gaussian vector with values in a Hilbert space hitting a ball of small radius. (Russian. English summary) **81g:60006**

Jajte, R. Semistable measures. **81f:60009**

Kozin, I. V. Approximation of probability measures on a Hilbert space by convex combinations of Dirac measures. (Russian) **81g:60007**

Laha, R. G. (*with* Rohatgi, V. K.) Semistable measures on a Hilbert space. **81h:60010**

Lapresté, Jean-Thierry Type, cotype et mesures de Lévy sur les espaces de Banach. **81c:60004**

Lipovan, O. The covariance operator of probability measures defined in the Banach space of bounded real measures. (Romanian. French summary) **81i:60006**

Mandrekar, V. *See* **Hamedani, G. G., 81g:60005**

Mincer, B. (*with* Urbanik, K.) Completely stable measures on Hilbert spaces. **81g:60008**

Muštari, D. H. Spaces in which criteria of the Bochner and Lévy type are satisfied. (Russian) **81b:60007**

Nguen Zuĭ Tien *See* **Đặng Hùng Thắng, 81f:60008**

Nguyen Van Thu Multiply self-decomposable probability measures on Banach spaces. **81f:60010**

Multiply self-decomposable measures in generalized convolution algebras. **81f:60011**

Okazaki, Yoshiaki Wiener integral by stable random measure. **81a:60010**

Plsier, Gilles Les inégalités de Khintchine-Kahane, d'après C. Borell. **81c:60005**

Puri, Madan Lal (*with* Hsü, Shih Hsiung) Realization of l_p by spaces of random variables. **81h:60011**

Račkauskas, A. A remark on stable measures on Banach spaces. (Russian. Lithuanian and English summaries) **81b:60008**

Rohatgi, V. K. *See* **Laha, R. G., 81h:60010**

Samur, Jorge D. *See* **de Acosta, Alejandro, 81d:60004**

Talagrand, Michel Les mesures gaussiennes qui ne sont pas de Radon. (English summary) **81m:60011**

Tarieladze, V. I. Characterization of covariance operators which guarantee the CLT. **81i:60007**

Taylor, Robert Lee Properties of stochastic processes characterized as function-valued random variables. **81i:60008**

Tortrat, Albert Lois indéfiniment divisibles et théorèmes de Itô-Nisio et Yurinkii. (English summary) **81h:60012**

Urbanik, K. Geometric decomposability properties of probability measures. **81b:60009**

See also **Mincer, B., 81g:60008**

Zolotarev, V. M. Ideal metrics in the problems of probability theory and mathematical statistics. **81e:60004a**

Corrigenda: "Ideal metrics in the problems of probability theory and mathematical statistics". **81e:60004b**

secondary classifications:

Bergström, H. Representation of infinitely divisible probability measures in l^2 and some of its subspaces. **(81d:60003)**

Borell, Christer On the integrability of Banach space valued Walsh polynomials. **(81g:42026)**

Dudley, R. M. Balls in $\mathbb{R}^k$ do not cut all subsets of $k+2$ points. **(81g:52010)**

Gadžiev, V. G. The Fourier transform of some classes of functions of an infinite number of variables. (Russian) **(81m:42013)**

Johnson, G. W. (*with* Skoug, D. L.) Scale-invariant measurability in Wiener space. **(81b:28016)**

Muštari, D. H. The notion of a normed space of cotype $p<2$. (Russian) **(81i:46012)**
Šangua, A. G. B_p-convex spaces. (Russian. Georgian and English summaries) **(81g:46020)**
Schmidt, Klaus D. Théorèmes de structure pour les amartingales en processus de fonctions d'ensembles à valeurs dans un espace de Banach. (English summary) **(81f:60073)**
Schwartz, Laurent Geometry and probabilities in Banach spaces. **(81b:46028)**
Skoug, D. L. *See* **Johnson, G. W., (81b:28016)**
Smoleński, Włodzimierz On quasi-invariance of product measures. **(81i:60044)**
Vahania, N. N. The correspondence between the concepts of a Gaussian measure and a Gaussian process. (Russian) **(81a:60053)**

60B12 Limit theorems for vector-valued random variables (infinite-dimensional case)

Aburrea, J. (*with* Campos, C.; San Miguel, M.) On conditional independence in the sense of Beck. (Spanish. English summary) **81h:60013**
Berning, John A., Jr. On the multivariate law of the iterated logarithm. **81i:60009**
Bernotas, V. The closeness of distributions of two sums of independent random variables with values in some Banach spaces. (Russian. Lithuanian and English summaries) **81k:60009**
(*with* Paulauskas, V. I.) A nonuniform estimate in the central limit theorem in some Banach spaces. (Russian. Lithuanian and English summaries) **81g:60009**
Borovskih, Ju. V. Nonuniform estimates in the central limit theorem in Hilbert space. I. (Russian. Lithuanian and English summaries) **81c:60006**
(*with* Račkauskas, A.) Asymptotic behavior of distributions in Banach spaces. (Russian. Lithuanian and English summaries) **81c:60007**
Bozorgnia, A. (*with* Rao, M. Bhaskara) Limit theorems for weighted sums of random elements in separable Banach spaces. **81a:60011**
Buldigin, V. V. (*with* Dončenko, V. S.) An oscillation theorem for Gaussian sequences in a Banach space. (Russian) **81g:60010**
Butzer, P. L. (*with* Hahn, L.; Roeckerath, M. Th.) General theorems on "little-o" rates of closeness of two weighted sums of independent Hilbert space valued random variables with applications. **81f:60012**
Campos, C. *See* **Aburrea, J.; et al., 81h:60013**
Čebotarev, V. I. Estimates of the convergence rate in the central limit theorem in l_p. (Russian) **81e:60005**
See also **Nagaev, S. V., 81d:60005**
Deo, Chandrakant M. A strong convergence theorem for stationary Gaussian sequences in a Hilbert space. **81e:60006**
Dončenko, V. S. *See* **Buldigin, V. V., 81g:60010**
Fham, Sjur D. On the convergence of linear combinations of random variables. **81c:60008**
Giné, Evarist (*with* Mandrekar, V.; Zinn, Joel) On sums of independent random variables with values in L_p $(2 \leq p < \infty)$. **81j:60009**
Corrections to: "Domains of attraction in Banach spaces" [Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/1978), pp. 24–40, Lecture Notes in Math., Vol. 721, Springer, Berlin, 1979; MR 80j:60018]. **81j:60010**
(*with* León, José R.) On the central limit theorem in Hilbert space. **81f:60013**
Hahn, L. *See* **Butzer, P. L.; et al., 81f:60012**
Heinkel, B. Relation between central-limit theorem and law of the iterated logarithm in Banach spaces. **81e:60007**
Jakubowski, Adam On limit theorems for sums of dependent Hilbert space valued random variables. **81k:60010**
Korzeniowski, Andrzej On the law of the iterated logarithm in Banach spaces. (Russian summary) **81j:60011**
León, José R. *See* **Giné, Evarist, 81f:60013**
Mandrekar, V. *See* **Giné, Evarist; et al., 81j:60009**
Marcus, Michael B. (*with* Woyczyński, Wojbor A.) Stable measures and central limit theorems in spaces of stable type. **81i:60010**
Nagaev, S. V. (*with* Čebotarev, V. I.) Estimates for the rate of convergence in the central limit theorem for random vectors with values in the space l_2. (Russian) **81d:60005**
Nguyen Duy Tien Sur le théorème des trois séries de Kolmogorov et la convergence en moyenne quadratique des martingales dans un espace de Banach. (Russian summary) **81b:60010**
Paulauskas, V. I. On the central limit theorem in the Banach space C_0. (Russian) **81k:60011**
See also **Bernotas, V., 81g:60009**
Philipp, Walter Almost sure invariance principles for sums of B-valued random variables. **81h:60014**
Weak and L^p-invariance principles for sums of B-valued random variables. **81i:60011**
Račkauskas, A. *See* **Borovskih, Ju. V., 81c:60007**
Rao, M. Bhaskara *See* **Bozorgnia, A., 81a:60011**
Roeckerath, M. Th. *See* **Butzer, P. L.; et al., 81f:60012**
Rosiński, Jan Some remarks on the central limit theorem in Banach spaces. **81i:60012**
Remarks on Banach spaces of stable type. **81m:60012**
San Miguel, M. *See* **Aburrea, J.; et al., 81h:60013**
Woyczyński, Wojbor A. *See* **Marcus, Michael B., 81i:60010**
Zapała, Michał August The Erdős-Rényi law of large numbers for a sequence of Wiener processes. (Russian summary) **81f:60014**
Zinn, Joel *See* **Giné, Evarist; et al., 81j:60009**

secondary classifications:

Bharucha-Reid, A. T. (*with* Kannan, Rangachary) Newton's method for random operator equations. **(81m:60121)**
Ghoussoub, Nassif A. (*with* Steele, J. Michael) Vector-valued subadditive processes and applications in probability. **(81b:60027)**
Kannan, Rangachary *See* **Bharucha-Reid, A. T., (81m:60121)**
Skorohod, T. A. Convergence of infinite products of independent random linear operators in a Hilbert space. (Russian. English summary) **(81h:60090)**
Steele, J. Michael *See* **Ghoussoub, Nassif A., (81b:60027)**

60B15 Probability measures on groups, Fourier transforms, factorization

Arnold, Barry C. Nonuniform decompositions of uniform random variables under summation modulo m. (Italian summary) **81a:60012**
Bougerol, Philippe Une majoration universelle des fonctions de concentration sur les groupes localement compacts non compacts. **81f:60015**
Brockett, Patrick L. (*with* Hudson, William N.) Zeros of the densities of infinitely divisible measures. **81m:60013**
Fel'dman, G. M. (*with* Fryntov, A. E.) Decomposition of the convolution of Gauss and Poisson distributions on locally compact abelian groups. (Russian) **81a:60013**
Fryntov, A. E. *See* **Fel'dman, G. M., 81a:60013**
Gerl, Peter Wahrscheinlichkeitsmasse auf diskreten Gruppen. **81a:60014**
Herrmann, Horst (*with* Kerstan, Johannes; Liese, Friedrich) Zweidimensionale und lokale Charakterisierung der asymptotischen Gleichverteilung. **81c:60009**
Heyer, Herbert Stetige Hemigruppen von Wahrscheinlichkeitsmaßen und additive Prozesse auf einer lokalkompakten Gruppe. **81a:60015**
Hudson, William N. *See* **Brockett, Patrick L., 81m:60013**
Janssen, Arnold Charakterisierung stetiger Faltungshalbgruppen durch das Lévy-Maß. **81d:60006**
A general purity law for convolution semigroups with discrete Lévy measure. **81e:60008**
Kerstan, Johannes *See* **Herrmann, Horst; et al., 81c:60009**
Le Page, Émile Théorème des grands écarts et théorème de la limite centrale pour certains produits de matrices aléatoires. (English summary) **81d:60007**
Liese, Friedrich *See* **Herrmann, Horst; et al., 81c:60009**
Major, P. (*with* Šlosman, S. B.) A local limit theorem for the convolution of probability measures on a compact connected group. **81h:60015**
Maksimov, V. M. Local theorems for Euclidean motions. I. **81h:60016**
Mukherjea, Arunava Limit theorems: stochastic matrices, ergodic Markov chains, and measures on semigroups. **81i:60013**
Nakassis, A. Limit behavior of the convolution iterates of a probability measure on a semigroup of matrices. **81d:60008**
Raghunathan, M. S. A proof of Oseledec's multiplicative ergodic theorem. **81f:60016**
Šlosman, S. B. *See* **Major, P., 81h:60015**
Truhina, I. P. A problem connected with the arithmetic of probability measures on spheres. (Russian. English summary) **81b:60011**
Arithmetic of spherically symmetric measures in Lobačevskiĭ space. (Russian) **81h:60017**
Wolff, Manfred Products of random variables depending on a random walk. **81a:60016**
Yuan, John On supports and equivalence of embeddable probability measures. **81e:60009**

secondary classifications:

Brunel, A. (*with* Revuz, Daniel) Marches de Harris sur les groupes localement compacts. V. (English summary) **(81h:60100)**
Embrechts, Paul A characterization of Fourier-Stieltjes transforms. **(81m:43009)**
Gallardo, Léonard (*with* Ries, V.) La loi des grands nombres pour les marches aléatoires sur le dual de SU(2). (English summary) **(81f:60046)**
Vitesse de fuite et comportement asymptotique du mouvement brownien sur les groupes nilpotents. (English summary) **(81j:60090)**
Ghosh, Sankar Generalisations of a few theorems due to Ramachandran, Sazonov and Robbins to the case of random variables taking values in sets more abstract than the real line. **(81b:28012)**
Högnäs, Göran (*with* Mukherjea, Arunava) Recurrent random walks and invariant measures on semigroups of $n \times n$ matrices. **(81m:60131)**
Kaĭmanovič, V. A. *See* **Veršik, A. M., (81f:60098)**
Kinzl, Franz Ein Null-Zwei-Gesetz auf lokalkompakten abelschen Halbgruppen. (English summary) **(81d:60067)**
Ledrappier, François (*with* Royer, Gilles) Croissance exponentielle de certains produits aléatoires de matrices. (English summary) **(81f:60095)**
Losert, Viktor (*with* Rindler, Harald) A note on random walks on compact groups. **(81d:60069)**
Mukherjea, Arunava *See* **Högnäs, Göran, (81m:60131)**
Narimanyan, S. M. Uniform distribution of random walks on topological groups. (Russian. Armenian summary) **(81g:60071)**
Okazaki, Yoshiaki Admissible translates of measures on a topological group. **(81b:28014)**
Revuz, Daniel *See* **Brunel, A., (81h:60100)**
Ries, V. *See* **Gallardo, Léonard, (81f:60046)**
Rindler, Harald *See* **Losert, Viktor, (81d:60069)**
Royer, Gilles *See* **Ledrappier, François, (81f:60095)**
Sarapa, Nikola On the (c, α) summability of probability measures on compact semigroups. **(81d:43002)**
On limiting properties of double series of probability distributions defined on compact commutative semigroups. (Serbo-Croatian summary) **(81h:43001)**
On limiting properties of m-dimensional series of probability distributions defined on compact commutative semigroups. (Serbo-Croatian summary) **(81h:43002)**
Veršik, A. M. (*with* Kaĭmanovič, V. A.) Random walks on groups: boundary, entropy, uniform distribution. (Russian) **(81f:60098)**

60B99 None of the above, but in this section

Alò, Richard A. (*with* de Korvin, André; Roberts, Charles E., Jr.) The optional sampling theorem for convex set-valued martingales. **81i:60014**
Féron, Robert Ensembles aléatoires flous dont la fonction d'appartenance prend ses valeurs dans un treillis distributif fermé. (English summary) **81h:60018**

Frank, M. J. (*with* Schweizer, Berthold) On the duality of generalized infimal and supremal convolutions. (Italian summary) **81a:60017**
de Korvin, André *See* **Alò, Richard A.; et al., 81i:60014**
Malyšev, V. A. (*with* Terleckiĭ, Ju. A.) A limit theorem for noncommutative fields. (Russian. English summary) **81d:60009**
Muštari, D. H. (*with* Šerstnev, A. N.) Les fonctions du triangle pour les espaces normés aléatoires. **81d:60010**
Pinelis, I. F. Estimates for moments of infinite-dimensional martingales. (Russian) **81k:60012**
Roberts, Charles E., Jr. *See* **Alò, Richard A.; et al., 81i:60014**
Schweizer, Berthold *See* **Frank, M. J., 81a:60017**
Šerstnev, A. N. *See* **Muštari, D. H., 81d:60010**
Sherwood, H. Isomorphically isometric probabilistic normed linear spaces. **81f:60017**
Terleckiĭ, Ju. A. *See* **Malyšev, V. A., 81d:60009**
Whitt, Ward Uniform conditional stochastic order. **81b:60012**
Yager, Ronald R. A note on probabilities of fuzzy events. **81g:60011**

secondary classifications:

Kinzl, Franz Absolut stetige Masse auf lokalkompakten Halbgruppen. (English summary) **(81g:43003)**
Kussmaul, A. U. Representation of Banach space valued quasimartingales by real quasimartingales. **(81m:60081)**
Morrel, B. (*with* Nagata, Jun-iti) Statistical metric spaces as related to topological spaces. **(81g:54003)**
Nagata, Jun-Iti *See* **Morrel, B., (81g:54003)**
Prevot, Daniel (*with* Schott, René) Marches aléatoires sur les espaces homogènes des groupes de Lie nilpotents simplement connexes. **(81f:60097)**
Schott, René *See* **Prevot, Daniel, (81f:60097)**
Schweizer, Berthold (*with* Sklar, Abe) Probabilistic information spaces. (French summary) **(81j:94006)**
Sklar, Abe *See* **Schweizer, Berthold, (81j:94006)**

60C05 Combinatorial probability

Arnold, H. *See* **Kiekebusch-Müller, B. D., 81m:60014**
Csáki, E. (*with* Földes, Antónia) On the first empty cell. **81e:60010**
Dion, Jean-Guy (*with* Raynaud, H.) Quelques nouvelles conditions suffisantes pour qu'une vidange soit forte. (English summary) **81f:60018**
Corrections and extensions: "Sur une caractérisation des vidanges fortes" [Adv. in Appl. Probab. **8** (1976), no. 1, 105–126; MR **52** #15597]. **81h:60019**
Földes, Antónia *See* **Csáki, E., 81e:60010**
Holst, Lars On matrix occupancy, committee, and capture-recapture problems. **81k:60013**
Kiekebusch-Müller, B. D. (*with* Arnold, H.) An iterative method for parameter estimation in gene-counting procedures. **81m:60014**
Kratko, M. I. (*with* Strok, V. V.) Random mappings and partitionings of finite sets. (Russian) **81m:60015**
Mihallov, V. G. Asymptotic normality of the number of empty cells in allocation of particles by groups. (Russian. English summary) **81j:60012**
Mohanty, Sri Gopal ★Lattice path counting and applications. **81f:60020**
Mutafčiev, Ljuben R. Limit properties of components of random mappings. **81i:60015**
Random mappings with constraints over the corresponding graphs. (Russian) **81c:60010**
Random mappings and their application to epidemic processes. **81j:60013**
Nandi, S. B. On a generalized Stirling distribution of the first kind. **81j:60014**
Narayana, T. V. ★Lattice path combinatorics with statistical applications. **81f:60019**
O'Brien, G. L. Pairwise independent random variables. **81d:60011**
Pradhan, Meena *See* **Sathe, Y. S.; et al., 81j:60015**
Raynaud, H. *See* **Dion, Jean-Guy, 81f:60018**
Sathe, Y. S. (*with* Pradhan, Meena; Shah, S. P.) Inequalities for the probability of the occurrence of at least m out of n events. **81j:60015**
Savčuk, M. N. Formulas for parameters of distribution of certain random variables in the problem of allocation of particles by complexes. (Russian) **81m:60016**
Shah, S. P. *See* **Sathe, Y. S.; et al., 81j:60015**
Strok, V. V. *See* **Kratko, M. I., 81m:60015**

secondary classifications:

Bollobás, Béla The distribution of the maximum degree of a random graph. **(81k:05087)**
Fishburn, Peter C. *See* **Gehrlein, William V., (81e:90010)**
Földes, Antónia The limit distribution of the length of the longest head-run. **(81b:60022a)**
Gehrlein, William V. (*with* Fishburn, Peter C.) Proportions of profiles with a majority candidate. **(81e:90010)**
Gilbert, E. N. Random colorings of a lattice of squares in the plane. **(81k:05037)**
Gordon, A. D. A measure of the agreement between rankings. **(81b:62073)**
Guibas, Leo J. (*with* Odlyzko, A. M.) Long repetitive patterns in random sequences. **(81m:60047)**
Odlyzko, A. M. *See* **Guibas, Leo J., (81m:60047)**
Pavlov, Ju. L. A case of limit distribution of the maximum size of a tree in a random forest. (Russian) **(81a:60048)**
Pearce, Lynn Hauser Random walks on trees. **(81f:60096)**
Piprek-Płocki, Adam Markoff's chain describing a certain experimental pattern. **(81k:60072)**
Quine, M. P. Three limit theorems for scores based on occupancy numbers. **(81b:60024)**
Révész, Pál Strong theorems on coin tossing. **(81e:60033)**
Ross, Sheldon M. A random graph. **(81m:05124)**
Sidorenko, A. F. Classes of hypergraphs and probability inequalities. (Russian) **(81m:05105)**
Spencer, Joel H. Optimally ranking unrankable tournaments. **(81h:05072)**
Steck, George P. Lattice paths and accelerated life testing. **(81k:62063)**
Walkup, David W. Matchings in random regular bipartite digraphs. **(81i:05078)**
Wenocur, Roberta S. Rediscovery and alternate proof of Gauss's identity. **(81k:05012)**

60D05 Geometric probability, stochastic geometry, random sets [See also 52A22, 53C65.]

Baddeley, Adrian J. A limit theorem for statistics of spatial data. **81d:60012**
Cruz Orive, Luis-M. Distortion of certain Voronoĭ tessellations when one particle moves. **81d:60013**
Davy, Pamela J. The stereology of location. **81m:60017**
Gates, David J. (*with* Westcott, Mark) Further bounds for the distribution of minimum interpoint distance on a sphere. **81m:60018**
Greenberg, Irwin The moments of coverage of a linear set. **81m:60019**
Grimaldi, Valeria (*with* Tanasi, Corrado) Geometric probability of "Buffon" type for trirectangular tetrahedra in E_3. (Italian. French summary) **81a:60018a**
(*with* Tanasi, Corrado) Families of parabolas that admit a measure in the projective space P_2. (Italian. French summary) **81a:60018b**
Holst, Lars On the lengths of the pieces of a stick broken at random. **81i:60016**
Hori, Motoo *See* **Tanemura, Masaharu; et al., 81b:60013**
Itoh, Yoshiaki On the minimum of gaps generated by one-dimensional random packing. **81a:60019**
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60Exx Distribution theory [See also 62Exx, 62Hxx.]

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60E07 Infinitely divisible distributions; stable distributions

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60E10 Characteristic functions; other transforms

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60E15 Inequalities (Čebyšev, Kolmogorov, etc.)

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60Fxx Limit theorems [See also 28Dxx, 60B12.]

60F05 Central limit and other weak theorems

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Nagaev, S. V. (*with* Sakojan, S. K.) A remark on the article: "An estimate for the probability of large deviations" [*Limit theorems and mathematical statistics* (Russian), pp. 132–140, "Fan" Uzbek. SSR, Tashkent, 1976; MR 55 #9237]. (Russian) **81h:60036**
Negishi, Hiroshi Probability inequalities of exponential type for continuous parameter processes and their applications. **81e:60029**
Pliner, V. M. Large deviations of the Kolmogorov, Kuiper and Rényi statistics. (Russian. English summary) **81i:60027**
Portal, Frédéric Théorème de grandes déviations pour des martingales et des processus ponctuels. (English summary) **81h:60037**
Rao, P. V. (*with* Wackerly, D. D.) A large deviation result for the difference in sample medians. **81m:60043**
Reeds, James Correction terms for multinomial large deviations. **81j:60036**
Richter, W.-D. Wahrscheinlichkeiten großer Abweichungen von Summen unabhängiger, identisch verteilter Zufallsvektoren. (Lithuanian and Russian summaries) **81d:60037**
Sakojan, S. K. *See* **Nagaev, S. V., 81h:60036**
Saulis, L. Large deviations in the scheme of summing random variables with weights. (Russian. Lithuanian and English summaries) **81a:60039**
Sethuraman, Jayaram Characterization of distributions by large deviation rates. **81f:60043**
Statulevičius, V. Large deviation theorems for sums of dependent random variables. I. (Russian. Lithuanian and English summaries) **81i:60028**
Varadhan, S. R. Srinivasa Some problems of large deviations. **81c:60031**
Valiček, Oldřich Alfonso A conditional law of large numbers. **81f:60044**
Ventcel', A. D. Rough limit theorems on large deviations for Markov random processes. III. (Russian. English summary) **81a:60040**
Volodin, N. A. (*with* Morozova, L. N.) Some estimates of probabilities of large deviations for martingales and sums of random vectors. (Russian) **81g:60027**
Wackerly, D. D. *See* **Rao, P. V., 81m:60043**
Wong, R. *See* **Fu, James C., 81f:60041**
Zabell, Sandy *See* **Bahadur, R. R.; et al., 81j:60034**

secondary classifications:

Azencott, R. Grandes déviations et applications. **(81m:58085)**
Babu, Gutti Jogesh (*with* Ghosh, Malay; Singh, Kesar) On rates of convergence to normality for φ-mixing processes. **(81m:60034)**
Borovkov, A. A. Rate of convergence and large deviations in invariance principle. **(81j:60044)**
Čibisov, D. M. Asymptotic behavior of partial densities and their derivatives. (Russian. English summary) **(81h:60026)**
Donsker, M. D. (*with* Varadhan, S. R. Srinivasa) On the number of distinct sites visited by a random walk. **(81j:60080)**
Freidlin, M. I. The averaging principle and theorems on large deviations. (Russian) **(81k:60059)**
Fu, James C. Large deviation, Bahadur efficiency, and the rate of convergence of linear function of order statistics. **(81i:62038)**
Ghosh, Malay *See* **Babu, Gutti Jogesh; et al., (81m:60034)**
Höglund, Thomas A unified formulation of the central limit theorem for small and large deviations from the mean. **(81j:60026)**
Lipskaja, V. A. On the problem of identification of multivariate observations. (Russian) **(81h:62114)**
Makianov, A. V. Large deviations in a linear model with nuisance parameters. (Russian. English summary) **(81a:62061)**
Minasjan, V. B. The averaging principle and theorem of large deviations for some families of extensions of an Anosov flow. (Russian) **(81h:58048)**
Oodaira, Hiroshi Note on Freidlin-Wentzell type estimates for stochastic processes. **(81k:60048)**
Singh, Kesar *See* **Babu, Gutti Jogesh; et al., (81m:60034)**
Varadhan, S. R. Srinivasa *See* **Donsker, M. D., (81j:60080)**

60F15 Strong theorems

Bártfai, P. Remarks on the exchangeable random variables. **81m:60044**
Beauzamy, Bernard (*with* Guerre, Sylvie) Une loi forte des grands nombres pour des variables aléatoires non intégrables. (English summary) **81e:60030**
Budianu, Gheorghe On the law of the iterated logarithm for sums of unbounded random vectors. (Romanian. English summary) **81h:60038**
Chan, Arthur H. C. Erdős-Rényi type modulus of continuity theorems for Brownian sheets. **81c:60032**
Csörgő, M. (*with* Révész, Pál) How big are the increments of a multiparameter Wiener process? **81a:60041**
Deo, Chandrakant M. Strong laws of large numbers for weakly stationary random fields. **81d:60038**
Dudley, R. M. *See* **Kuelbs, J., 81k:60040**
Elker, J. (*with* Pollard, David; Stute, W.) Glivenko-Cantelli theorems for classes of convex sets. **81a:60042**
Fernholz, Luisa Turrin Limit points associated with generalized iterated logarithm laws. **81f:60045**
(*with* Teicher, Henry) Stability of random variables and iterated logarithm laws for martingales and quadratic forms. **81j:60037**
Gafurov, M. U. Some remarks on the law of large numbers in $\mathbf{R}^d$. (Russian) **81c:60033**
An application of an analogue of an inequality of S. V. Nagaev and D. H. Fuk for weighted sums of independent random variables to the law of large numbers. (Russian) **81c:60034**
(*with* Siraždinov, S. H.) Some generalizations of the results of Erdős and Katz connected with the strong law of large numbers, and their applications. (Russian) **81e:60031**
On the existence of moments of the number of crossings by sample sums of a curvilinear boundary and of the time of last exit. (Russian) **81j:60038**
Behavior of sums of independent random variables with regularly varying tails. (Russian) **81m:60045**
See also **Siraždinov, S. H.; et al., 81i:60032**
Gallardo, Léonard (*with* Ries, V.) La loi des grands nombres pour les marches aléatoires sur le dual de SU(2). (English summary) **81f:60046**
Geman, Stuart A limit theorem for the norm of random matrices. **81m:60046**
Ghoussoub, Nassif A. (*with* Steele, J. Michael) Vector-valued subadditive processes and applications in probability. **81b:60027**
Guerre, Sylvie *See* **Beauzamy, Bernard, 81e:60030**
Guibas, Leo J. (*with* Odlyzko, A. M.) Long repetitive patterns in random sequences. **81m:60047**
Gut, Allan Convergence rates for probabilities of moderate deviations for sums of random variables with multidimensional indices. **81c:60035**
Györfi, L. (*with* Györfi, Z.; Vajda, Igor) A strong law of large numbers and some applications. **81g:60028**
Györfi, Z. *See* **Györfi, L.; et al., 81g:60028**
Heyde, C. C. A log log improvement to the Riemann hypothesis for the Hawkins random sieve. **81h:60039**
On a probabilistic analogue of the Fibonacci sequence. **81k:60039**
Ibéro, Michel Approximation forte du processus empirique fonctionnel multidimensionnel. (English summary) **81a:60043**
Karr, Alan F. Classical limit theorems for measure-valued Markov processes. **81a:60044**
Kl'osov, O. I. On the strong law of large numbers. (Russian. English summary) **81b:60028**
A strong law of large numbers for random fields with independent values. (Russian. English summary) **81c:60036**
Koucekov, B. *See* **Siraždinov, S. H.; et al., 81i:60032**
Kuelbs, J. (*with* Dudley, R. M.) Log log laws for empirical measures. **81k:60040**
Lai, Tze Leung (*with* Robbins, Herbert) Limit theorems for weighted sums and stochastic approximation processes. **81g:60029**
(*with* Stout, William) Limit theorems for sums of dependent random variables. **81i:60029**
Landers, D. (*with* Rogge, L.) A short proof for a.e. convergence of generalized conditional expectations. **81i:60030**
Lootgieter, Jean-Claude Processus généraux de branchements et procédure de Kakutani généralisée. (English summary) **81c:60037**
Major, P. A note on Kolmogorov's law of iterated logarithm. **81d:60039**
Maller, R. A. On convergence rates and the expectation of sums of random variables. **81i:60031**
On one-sided boundedness of normed partial sums. **81j:60039**
An extension of Kesten's generalised law of the iterated logarithm. **81j:60040**
On the law of the iterated logarithm in the infinite variance case. **81j:60041**
Martikainen, A. I. Necessary and sufficient conditions for the strong law of large numbers. (Russian. English summary) **81g:60030**
Mijnheer, Joop A strong approximation of partial sums of i.i.d. random variables with infinite variance. **81e:60032**
Móricz, Ferenc Multiparameter strong laws of large numbers. II. Higher order moment restrictions. **81b:60029**
Strong laws of large numbers for quasistationary random fields. **81k:60041**
Odlyzko, A. M. *See* **Guibas, Leo J., 81m:60047**
Oganesjan, G. K. On series of independent random variables. (Russian. Armenian and English summaries) **81d:60040**
Peligrad, Magda Local convergence for sums of dependent random variables and the

law of large numbers. **81f:60047**

Petrov, V. V. A remark on the lower limit of the absolute values of sums of independent random variables. (Russian. Lithuanian and English summaries) **81a:60045**

Pollard, David *See* **Elker, J.; et al., 81a:60042**

Pyke, Ronald The asymptotic behavior of spacings under Kakutani's model for interval subdivision. **81e:60038**

Révész, Pál Strong theorems on coin tossing. **81e:60033**
See also **Csörgő, M., 81a:60041**

Ries, V. *See* **Gallardo, Léonard, 81f:60046**

Robbins, Herbert *See* **Lai, Tze Leung, 81g:60029**

Rogge, L. *See* **Landers, D., 81i:60030**

Sarapa, Nikola A note on the law of large numbers. (Serbo-Croatian summary) **81c:60039**

Schumann, G. *See* **Stute, W., 81j:60042**

Sen, Pranab Kumar On almost sure linearity theorems for signed rank order statistics. **81d:60041**

Serfling, R. J. On the strong law of large numbers and related results for quasistationary sequences. (Russian summary) **81c:60040**

Sirazdinov, S. H. (*with* Gafurov, M. U.; Komekov, B.) Some remarks on the strong law of large numbers for sums of a random number of summands. (Russian. Uzbek summary) **81i:60032**
See also **Gafurov, M. U., 81e:60031**

Smythe, R. T. Maxima of partial sums and a monotone regression estimator. **81f:60048**

Steele, J. Michael *See* **Ghoussoub, Nassif A., 81b:60027**

Stout, William Almost sure invariance principles when $EX_1^2 = \infty$. **81b:60030**
See also **Lai, Tze Leung, 81i:60029**

Stute, W. (*with* Schumann, G.) A general Glivenko-Cantelli theorem for stationary sequences of random observations. **81j:60042**
See also **Elker, J.; et al., 81a:60042**

Takahashi, Shigeru Almost sure invariance principles for lacunary trigonometric series. **81e:60041**

Teicher, Henry *See* **Fernholz, Luisa Turrin, 81j:60037**

Vajda, Igor *See* **Györfi, L.; et al., 81g:60028**

Yoshihara, Ken-ichi The Borel-Cantelli lemma for strong mixing sequences of events and their applications to LIL. **81m:60048**

Zapała, Michał August Convergence rates for quadratic forms of random variables. **81e:60042**

Zheng, Wei An A note on the convergence of sequences of conditional expectations of random variables. **81k:60042**

van Zwet, W. R. A strong law for linear functions of order statistics. **81j:60043**

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Asmussen, Søren (*with* Kurtz, Thomas G.) Necessary and sufficient conditions for complete convergence in the law of large numbers. **(81d:60034)**

Chow, Y. S. (*with* Lai, Tze Leung) On the maximal excess in boundary crossings of random walks related to fluctuation theory and laws of large numbers. **(81a:60076)**

Daffer, Peter Z. *See* **Taylor, Robert Lee, (81h:60007)**

Denker, Manfred (*with* Keane, Michael) Finitary codes and the law of the iterated logarithm. **(81m:60056)**

Deo, Chandrakant M. A strong convergence theorem for stationary Gaussian sequences in a Hilbert space. **(81e:60006)**

Donsker, M. D. (*with* Varadhan, S. R. Srinivasa) A law of the iterated logarithm for total occupation times of transient Brownian motion. **(81b:60080)**

Etemadi, Nasrollah Further limit theorems for the range of a two-parameter random walk in space. **(81i:60063)**

Ghosh, Malay *See* **Sotres, David A., (81f:60038)**

de Haan, Laurens (*with* Taconis-Haantjes, Elselien) On Bahadur's representation of sample quantiles. **(81j:62091)**

Hebbar, H. Vishnu A law of the iterated logarithm for extreme values from Gaussian sequences. **(81d:60048)**

Hooda, Ikuji Note on the weak and strong laws of large numbers for a class of linear processes. **(81g:60035)**

Keane, Michael *See* **Denker, Manfred, (81m:60056)**

Kolčins'kiĭ, V. I. Some limit theorems for empirical measures. (Russian. English summary) **(81d:60031)**

Korostelev, A. P. Convergence of recursive stochastic algorithms under Gaussian disturbances. **(81i:62150)**

Korzeniowski, Andrzej On the law of the iterated logarithm in Banach spaces. (Russian summary) **(81j:60011)**

Kurtz, Thomas G. *See* **Asmussen, Søren, (81d:60034)**

Lai, Tze Leung *See* **Chow, Y. S., (81a:60076)**

McCormick, William P. An extension to a strong law result of Mittal and Ylvisaker for the maxima of stationary Gaussian processes. **(81f:60054)**

McGinley, W. G. A note on dissociatedness and order statistics. **(81h:62085)**

Móricz, Ferenc Exponential estimates for the maximum of partial sums. II. Random fields. **(81m:60029)**
(*with* Révész, Pál) Multiplicative systems. (Hungarian) **(81m:42023)**

Narita, Kiyomasa On the law of the iterated logarithm for diffusion processes. (Japanese summary) **(81e:60085)**

Neaderhouser, Carla C. Some limit theorems for random fields. **(81h:60125)**

Révész, Pál *See* **Móricz, Ferenc, (81m:42023)**

Sotres, David A. (*with* Ghosh, Malay) On Bahadur's representation of sample quantiles for nonstationary mixing processes. **(81f:60038)**

Taconis-Haantjes, Elselien *See* **de Haan, Laurens, (81j:62091)**

Taylor, Robert Lee (*with* Daffer, Peter Z.) Convergence of weighted sums of random elements in $D[0, 1]$. **(81h:60007)**

Varadhan, S. R. Srinivasa *See* **Donsker, M. D., (81b:60080)**

Vasudeva, R. Functional law of the iterated logarithm for i.i.d. random variables attracted to a completely asymmetric stable law. (Russian summary) **(81d:60042)**

Watanabe, Mac-fumi An almost sure convergence theorem in a stochastic approximation method with dependent random variables. **(81d:62091)**

Wierman, John C. Weak moment conditions for time coordinates in first-passage percolation models. **(81k:60105)**

60F17 Functional limit theorems; invariance theorems

Ahmad, Ibrahim A. (*with* Lin, Pi Erh) On the Chernoff-Savage theorem for dependent sequences. **81m:60049**

Berkes, István (*with* Philipp, Walter) A new method to prove limit theorems for mixing r.v.'s and its applications. **81i:60033**
A remark on Strassen's theorem. **81b:60031**

Borodin, A. N. Some limit theorems for processes with random time. (Russian. English summary) **81c:60043**

Borovkov, A. A. Rate of convergence and large deviations in invariance principle. **81j:60044**

Csörgő, Sándor On the quantogram of Kendall and Kent. **81k:60040**

Davydov, Ju. A. Strong convergence and local limit theorems for functionals of supremum type. (Russian. English summary) **81g:60031**

Dorea, C. C. Y. *See* **Rosenkrantz, Walter A., 81h:60041**

Durrett, Richard Conditioned limit theorems for some null recurrent Markov processes. **81a:60046**

Helland, Inge S. On weak convergence to Brownian motion. **81j:60045**

Ivanov, O. V. (*with* Leonenko, M. M.) An invariance principle for an estimator of the correlation function of a homogeneous random field. (Russian) **81i:60034**

Kanlovskiĭ, Ju. M. Limit theorems for random processes, and stochastic Markov recurrent procedures. **81m:60050**

Kushner, Harold J. A martingale method for the convergence of a sequence of processes to a jump-diffusion process. **81m:60051**

Leonenko, M. M. *See* **Ivanov, O. V., 81i:60034**

Lin, Pi Erh *See* **Ahmad, Ibrahim A., 81m:60049**

Mirahmedov, Š. A. Limit theorems for the first passage time over a step-boundary. (Russian. Lithuanian and English summaries) **81c:60044**

Morrow, Gregory J. Invariance principles for Gaussian sequences. **81e:60034**

Philipp, Walter *See* **Berkes, István, 81i:60033**

Rosenkrantz, Walter A. (*with* Dorea, C. C. Y.) Limit theorems for Markov processes via a variant of the Trotter-Kato theorem. **81h:60041**

Sen, Pranab Kumar (*with* Tsong, Y.) On functional central limit theorems for certain continuous time parameter stochastic processes. **81m:60052**

Starcev, A. N. Some results connected with the invariance principle. (Russian) **81g:60032**

Szczotka, Władysław Central limit theorem in $D[0, \infty]$ for breakdown processes. **81m:60053**

Tsong, Y. *See* **Sen, Pranab Kumar, 81m:60052**

Vasudeva, R. Functional law of the iterated logarithm for i.i.d. random variables attracted to a completely asymmetric stable law. (Russian summary) **81d:60042**

Whitt, Ward Some useful functions for functional limit theorems. **81e:60035**

Yoshihara, Ken-ichi Convergence rates of the invariance principle for absolutely regular sequences. **81e:60036**

secondary classifications:

Borovkov, A. A. ★Асимптотические методы в теории массового обслуживания. (Russian) [Asymptotic methods in queueing theory] **(81k:60092)**

Csörgő, M. (*with* Rychlik, Zdzisław) Weak convergence of sequences of random elements with random indices. **(81d:60027)**

Dudley, R. M. Central limit theorems for empirical measures. **(81k:60029a)**
Corrections to: "Central limit theorems for empirical measures". **(81k:60029b)**

Durrett, Richard Conditioned limit theorems for random walks with negative drift. **(81h:60095)**

Formanov, Š. K. *See* **Sirazdinov, S. H., (81m:60041)**

Lai, Tze Leung (*with* Robbins, Herbert) Limit theorems for weighted sums and stochastic approximation processes. **(81g:60029)**

Lawler, Gregory F. A self-avoiding random walk. **(81j:60081)**

Mielke, Paul W., Jr. *See* **O'Reilly, Federico J., (81f:62041)**

O'Reilly, Federico J. (*with* Mielke, Paul W., Jr.) Asymptotic normality of MRPP statistics from invariance principles of U-statistics. **(81f:62041)**

Philipp, Walter Weak and L^p-invariance principles for sums of B-valued random variables. **(81i:60011)**

Prakasa Rao, B. L. S. On central limit theorems, invariance principle and rates of convergence for backwards martingale arrays. (Lithuanian and Russian summaries) **(81d:60033)**

Robbins, Herbert *See* **Lai, Tze Leung, (81g:60029)**

Rootzén, Holger Limit distributions for the error in approximations of stochastic integrals. **(81e:60066)**

Rychlik, Zdzisław *See* **Csörgő, M., (81d:60027)**

Sato, Ken-iti Convergence to a diffusion of a multi-allelic model in population genetics. **(81d:92010)**

Sirazdinov, S. H. (*with* Formanov, Š. K.) ★Предельные теоремы для сумм случайных векторов, связанных в цепь Маркова. (Russian) [Limit theorems for sums of random vectors connected in a Markov chain] **(81m:60041)**

Stout, William Almost sure invariance principles when $EX_1^2 = \infty$. **(81b:60030)**

Tudor, Constantin An invariance principle for Markov processes with two-dimensional time parameter. **(81e:60083)**

Usmanov, H. H. Limit theorems in function spaces for linear forms of additive functions defined on sparse sets. (Russian. Tajiki summary) **(81d:10045)**
Limit theorems in function spaces for additive functions on sparse sets. (Russian. Tajiki summary) **(81d:10046)**

60F20 Zero-one laws

Aldous, David (*with* Pitman, Jim) On the zero-one law for exchangeable events. **81b:60032**
Pitman, Jim *See* **Aldous, David, 81b:60032**

secondary classifications:

Rösler, Uwe Eine Mischungseigenschaft von Zufallsvariablen. **(81k:60036)**
The tail σ-field of time-homogeneous one-dimensional diffusion processes. **(81e:60086)**
Yoshihara, Ken-ichi The Borel-Cantelli lemma for strong mixing sequences of events and their applications to LIL. **(81m:60048)**

60F25 L^p-limit theorems

secondary classifications:

Kruglov, V. M. The sum and the order statistics of independent random variables. (Russian. English summary) **(81a:60034)**

60F99 None of the above, but in this section

Akinfiev, G. A. (*with* Leonenko, M. M.) Strong law of large numbers for weighted random variables and its application to recurrent optimization procedures. **81m:60054**
Girko, V. L. A central limit theorem for random determinants. (Russian. English summary) **81b:60033**
Latyšev, K. P. *See* **Zolotuhina, L. A., 81c:60045**
Leonenko, M. M. *See* **Akinfiev, G. A., 81m:60054**
Masol, V. I. Invariance limit theorems for a system of random linear equations over a finite field. (Russian) **81b:60034**
Mica, N. Sur la comparabilité des séries de variables aléatoires. **81a:60047**
Pavlov, Ju. L. A case of limit distribution of the maximum size of a tree in a random forest. (Russian) **81a:60048**
Yoshihara, Ken-ichi Note on an almost sure invariance principle for some empirical processes. **81f:60049**
Zolotuhina, L. A. (*with* Latyšev, K. P.) Asymptotic representation of the average number of paired elements in the order statistics of a two-dimensional sample. (Russian. English summary) **81c:60045**

secondary classifications:

Billard, L. (*with* Lacayo, H.; Langberg, N. A.) The discrete asymptotic behaviour of a simple batch epidemic process. **(81g:92017)**
Csáki, E. (*with* Földes, Antónia) On the first empty cell. **(81e:60010)**
Englund, Gunnar Remainder term estimate for the asymptotic normality of the number of renewals. **(81m:60156)**
Földes, Antónia *See* **Csáki, E., (81e:60010)**
Hawkes, John Probabilistic behaviour of some lacunary series. **(81h:42012)**
Koroljuk, V. S. (*with* Turbin, A. F.; Tomusjak, A. A.) Sojourn time of a semi-Markov process in a decomposing set of states. (Russian) **(81f:60123)**
Lacayo, H. *See* **Billard, L.; et al., (81g:92017)**
Langberg, N. A. *See* **Billard, L.; et al., (81g:92017)**
Levikson, B. On the behavior of a certain class of approximation operators for discontinuous functions. **(81b:41054)**
Ljaščenko, N. N. Limit theorems for sums of independent compact random subsets of a Euclidean space. (Russian. English summary) **(81k:60014)**
Phadia, E. G. (*with* Van Ryzin, John) A note on convergence rates for the product limit estimator. **(81e:62042)**
Tomusjak, A. A. *See* **Koroljuk, V. S.; et al., (81f:60123)**
Turbin, A. F. *See* **Koroljuk, V. S.; et al., (81f:60123)**
Van Ryzin, John *See* **Phadia, E. G., (81e:62042)**

60Gxx Stochastic processes

60G05 Foundations of stochastic processes

Delbaen, F. (*with* Haezendonck, J.) A stochastic process that is not progressively measurable. **81b:60035**
Dellacherie, C. Quelques exemples familiers, en probabilités, d'ensembles analytiques, non boréliens. **81f:60050**
Haezendonck, J. *See* **Delbaen, F., 81b:60035**

secondary classifications:

Riečan, Beloslav On the Kolmogoroff theorem and the infinite product of probability spaces. (Slovak and Russian summaries) **(81j:28010)**
Speed, T. P. Decompositions of graphs and hypergraphs. **(81a:05106)**

60G07 General theory of processes

(Azéma, Jacques) *See* **Meyer, P. A., 81h:60043**
Bismut, Jean-Michel Régularité et continuité des processus. **81g:60033**
Emery, M. Sur un théorème de J. M. Bismut. **81i:60035**
Licea, Gabriela On the projections of stochastic processes. **81a:60049**
Meyer, P. A. Une remarque sur le calcul stochastique dépendant d'un paramètre. **81h:60042**
Représentations multiplicatives de sousmartingales (d'après J. Azéma). **81h:60043**
Pierre, Percy A. On the independence of linear functionals of linear processes. (*See* **81e:60004**)

secondary classifications:

Maingueneau, M. A. Temps d'arrêt optimaux et théorie générale. **(81j:60055)**
Nualart, David On the order convergence of stochastic processes. (Spanish) **(81m:60068)**

60G10 Stationary processes

Anděl, Jiří On reversed multiple processes. **81h:60044**
Berman, Simeon M. Stationarity, isotropy and sphericity in l_p. **81m:60055**
Bradley, Richard C., Jr. A note on a mixing condition. **81j:60046**
Denker, Manfred (*with* Keane, Michael) Finitary codes and the law of the iterated logarithm. **81m:60056**
Fichtner, Karl-Heinz Stationäre Folgen von Zufallsvariablen als Lösung unendlicher Gleichungssysteme. **81d:60043**
Fortet, R. Suites, en particulier stationnaires de vecteurs aléatoires d'ordre 2. (English summary) **81i:60036**
Friedrich, Hermann Determination of the first passage probability in stationary random processes. **81m:60057**
Gray, Robert M. (*with* Kieffer, John C.) Asymptotically mean stationary measures. **81m:60058**
Gundel, Horst Weakly and strongly mixing locally compact abelian groups of measure preserving transformations with application to abelian groups of Gaussian automorphisms. **81a:60050**
Some contributions to the $\bar{\rho}$-distance for stationary processes. **81f:60051**
Halidov, I. A. Some problems of the theory of correlation functions. (Russian. English summary) **81j:60047**
Hasofer, A. M. Extreme value theory: a review of approaches. **81d:60044**
A uniqueness problem for the envelope of an oscillatory process. **81a:60051**
Hristov, Hristo Ja. A stationary random process of "white noise" type with special properties. (Russian. Bulgarian and English summaries) **81f:60052**
Kawata, Tatsuo The nonvanishing property of a weakly stationary process. **81m:60059**
Keane, Michael *See* **Denker, Manfred, 81m:60056**
Kieffer, John C. *See* **Gray, Robert M., 81m:60058**
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Yoshihara, Ken-ichi Convergence rates of the invariance principle for absolutely regular sequences. **(81e:60036)**

Note on an almost sure invariance principle for some empirical processes. **(81f:60049)**

60G12 General second-order processes

Bulatović, Jelena (*with* Janjić, Slobodanka) On one estimation problem. **81g:60034**

Butzer, P. L. (*with* Gather, U.) Asymptotic expansions for central limit theorems for general linear stochastic processes. I. General theorems on rates of convergence. **81c:60048a**

(*with* Gather, U.) Asymptotic expansions for central limit theorems for general linear stochastic processes. II. Models of the general random noise and pulse train processes. **81c:60048b**

Dragan, Ja. P. Properties of bases of representation of a random process specified on an interval, justification of its canonical expansion and some aspects of the rhythm model. (Russian) **81m:60061**

Fortet, R. Covariance des fonctions aléatoires réelles non négatives. (English summary) **81m:60062**

Gather, U. *See* **Butzer, P. L., 81c:60048a** *and* **Butzer, P. L., 81c:60048b**

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Sample periodicity of periodically correlated processes. **81k:60044**

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Janssen, A. J. E. M. ★Application of the Wigner distribution to harmonic analysis of generalized stochastic processes. **81d:60045**

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Anderson, Oliver D. Serial dependence properties of linear processes. **(81m:62162)**

Battaglia, Francesco Some extensions in the evolutionary spectral analysis of a stochastic process. (Italian summary) **(81g:62160)**

Devlin, Thomas F. On the sample continuity of general linear processes. **(81e:60039)**

Fortet, R. Suites, en particulier stationnaires de vecteurs aléatoires d'ordre 2. (English summary) **(81i:60036)**

Kailath, Thomas *See* **Anderson, Brian D. O., (81c:93071)**

Nagai, Takeaki On finite parametric linear models of dyadic stationary processes. **(81m:60060)**

60G15 Gaussian processes

Assouad, Patrice Plongements lipschitziens dans $\mathbf{R}^n$ et courbes de Von Koch. (English summary) **81f:60055**

(Beljaev, Ju. K.) *See* **Random processes. Sample functions and intersections, 81j:60049**

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Diebolt, Jean Sur la loi du maximum de certains processus stochastiques. (English summary) **81d:60046**

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Ellis, Richard S. (*with* Rosen, Jay S.) Asymptotic expansions of Gaussian integrals. **81k:60046**

Gladka, O. M. (*with* Kozačenko, Ju. V.) Conditions for uniform convergence in probability of some stochastic integrals. (Russian) **81f:60057**

Gutiérrez Jaimez, Ramón A comparison theorem of Marcus-Shepp in the uniform continuity of Gaussian processes. **81h:60048**

Hasofer, A. M. (*with* Petocz, P.) Transient upcrossings of the linear oscillator and its envelope. **81d:60047**

Hebbar, H. Vishnu A law of the iterated logarithm for extreme values from Gaussian sequences. **81d:60048**

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Okabe, Yasunori On a stationary Gaussian process with T-positivity and its associated Langevin equation and S-matrix. **81c:60049**

Oodaira, Hiroshi Note on Freidlin-Wentzell type estimates for stochastic processes. **81k:60048**

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60G20 Generalized stochastic processes

Channing, Chilaw Representation of random linear functionals on certain $S\{M_p\}$ spaces. **81b:60037**

Meidan, Reuven Hilbert spaces of functionals associated with nonlinear operators. **81e:60041**

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Cassandro, M. *See* **Benfatto, G.; et al., (81e:81081)** *and* **Benfatto, G.; et al., (81g:81045)**

Gallavotti, G. *See* **Benfatto, G.; et al., (81e:81081)** *and* **Benfatto, G.; et al., (81g:81045)**

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60G25 Prediction theory [See also 62M20.]

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Mališić, Jovan On the extrapolation of some stationary processes with nonrational densities given the entire past. (Russian) **81m:60072**

de Maré, Jacques Optimal prediction of catastrophes with applications to Gaussian processes. **81m:60071**

Mazziotto, Géraid *See* **Szpirglas, Jacques, 81c:60056**

Miamee, A. G. (*with* Salehi, H.) On the prediction of periodically correlated stochastic processes. **81c:60054**

Nguyen Van Thu Prediction problems. **81f:60059**

Niemi, Hannu On the construction of Wold decomposition for multivariate stationary processes. **81g:60039**

Novikov, A. A. Optimal interpolation of partially observed two-dimensional random fields. (Russian) **81g:60040**

Okabe, Yasunori Innovation processes associated with stationary Gaussian processes with application to the problem of prediction. **81c:60055**

Piranašvili, Z. A. (*with* Aslanidi, N. P.; Sulaberidze, T. G.) Explicit formulas for the optimal linear predictor and its mean square error for a stationary sequence. (Russian. Georgian and English summaries) **81j:60051**

Rosenblatt, Murray Linear processes and bispectra. **81d:60051**

Rozanov, Ju. A. Stochastic Markovian fields. **81h:60054**

Sackrowitz, Harold The influence of the nonrecent past in prediction for stochastic processes. **81f:60060**

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Seghier, Abdellatif Prédiction linéaire et opérateur de Hankel. (English summary) **81f:60061**

Shepp, L. A. (*with* Slepian, D.; Wyner, Aaron D.) On prediction of moving-average processes. **81g:60041**

Slepian, D. *See* **Shepp, L. A.; et al., 81g:60041**

Sulaberidze, T. G. *See* **Piranašvili, Z. A.; et al., 81j:60051**

Szpirglas, Jacques (*with* Mazziotto, Gérald) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. **81c:60056**

Wyner, Aaron D. *See* **Shepp, L. A.; et al., 81g:60041**

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Bulatović, Jelena (*with* Janjić, Slobodanka) On one estimation problem. **(81g:60034)**

Janjić, Slobodanka *See* **Bulatović, Jelena, (81g:60034)**

Klimavičius, V. *See* **Brikman, M. S., (81d:94005)**

Künsch, H. Gaussian Markov random fields. **(81g:60056)**

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Thrum, R. Linear estimation and prediction in stochastic processes. **(81m:62178)**

Weron, Aleksander *See* **Schmidt, Franz, (81c:60046)**

60G30 Continuity and singularity of induced measures

Glötzl, E. On the singularity of (Σ) point processes. **81h:60055**

Jacod, Jean Local characteristics and absolute continuity conditions for d-dimensional semimartingales. **81e:60043**

Kabanov, Ju. M. (*with* Lipcer, R. Š.; Širjaev, A. N.) Necessary and sufficient conditions for absolute continuity of measures corresponding to point (counting) processes. **81j:60052**

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Širjaev, A. N. *See* **Kabanov, Ju. M.; et al., 81j:60052**
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Guyon, Xavier (*with* Prum, Bernard) Identification et estimation d'un modèle de semi-martingale à indice dans $\mathbf{R}_+^2$. (English summary) **(81f:60066)**
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Prum, Bernard *See* **Guyon, Xavier, (81f:60066)**
Salov, G. I. A stochastic approximation theorem in a Hilbert space and its applications. (Russian. English summary) **(81g:62143)**
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Shah, S. P. *See* **Sathe, Y. S.; et al., (81j:60015)**
Sotres, David A. (*with* Ghosh, Malay) Asymptotic properties of linear functions of order statistics for nonstationary mixing processes. **(81k:60038)**
Zschiesche, Hans-Ullrich *See* **Artzig, Jutta, (81e:60064)**

60G35 Applications (signal detection, filtering, etc.) [See also 62M20, 94Axx.]

Balakrishnan, A. V. Nonlinear white noise theory. **81i:60045**
Bensoussan, A. (*with* Chow, P. L.; Lions, Jacques-Louis) Filtering theory for stochastic processes with two-dimensional time parameter. **81j:60053**
Cavassilas, Jean-François Propriétés de la transinformation passé-avenir relative à des processus stationnaires de Gauss-Markoff. (English summary) **81h:60057**
Chow, P. L. *See* **Bensoussan, A.; et al., 81j:60053**
Curiel, Joaquin A representation theorem for linear filters. **81g:60042**
Dragan, Ja. P. Interpolation formulas in classes of functions and a remainder theorem in signal theory. (Russian) **81b:60040**
Grigelionis, B. (*with* Mikulevičius, R.) On statistical problems of stochastic processes with penetrable boundaries. **81h:60058**
Körezlioğlu, Hayri (*with* Mazziotto, Gérald; Szpirglas, Jacques) Équations du filtrage non linéaire pour des processus à deux indices. (English summary) **81g:60043**
Recursive linear filtering of two-parameter Gaussian Markov processes. **81e:60044**
Krylov, N. V. The equality of σ-algebras in the filtering problem for diffusion processes. (Russian. English summary) **81g:60044**
Lions, Jacques-Louis *See* **Bensoussan, A.; et al., 81j:60053**
Mazziotto, Gérald *See* **Szpirglas, Jacques, 81e:60045** *and* **Körezlioğlu, Hayri; et al., 81g:60043**
Michel, Dominique Régularité de lois conditionnelles en théorie du filtrage non linéaire. (English summary) **81a:60054**
Mikulevičius, R. *See* **Grigelionis, B., 81h:60058**
Pardoux, E. Filtering of a diffusion process with Poisson-type observation. **81j:60054**
Šťastný, František An optimal property of the best linear unbiased interpolation filter. **81m:60073**
Sucu, Ion (*with* Valuşescu, Ilie) A linear filtering problem in complete correlated actions. **81h:60059**
Szpirglas, Jacques (*with* Mazziotto, Gérald) A general nonlinear filtering model and associated stochastic differential equations. **81e:60045**
See also **Körezlioğlu, Hayri; et al., 81g:60043**
Valuşescu, Ilie *See* **Sucu, Ion, 81h:60059**
Van Schuppen, J. H. Stochastic filtering theory: a discussion of concepts, methods, and results. **81i:60046**
Vetrov, L. G. On the filtering of semimartingales. (Russian) **81m:60074**
Walk, H. Sequential estimation of the solution of an integral equation in filtering theory. **81m:60075**

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Capetanakis, John I. Tree algorithms for packet broadcast channels. **(81b:94005)**
Di Masi, Giovanni B. (*with* Runggaldier, Wolfgang J.) A continuous-time approximation to optimal nonlinear filtering. **(81m:93075)**
Eshleman, Linda R. *See* **Lo, James Ting Ho, (81j:93056)**
Föllmer, Hans Martingale criteria for stochastic stability. **(81c:93088)**
Johnson, Carl (*with* Stear, Edwin B.) Reproducing probability density classes on Lie groups with application to discrete-time filtering. **(81d:93064)**
Kronberg, A. A. Asymptotics of mathematical expectation of the number of steps of an ε-spherical process. (Russian) **(81f:65006)**
Lindgren, Georg Model processes in nonlinear prediction with application to detection and alarm. **(81m:60070)**
Lo, James Ting Ho (*with* Eshleman, Linda R.) Exponential Fourier densities and optimal estimation for axial processes. **(81j:93056)**
de Maré, Jacques Optimal prediction of catastrophes with applications to Gaussian processes. **(81m:60071)**
Mazziotto, Gérald (*with* Szpirglas, Jacques) Un théorème de séparation pour le contrôle impulsionnel. (English summary) **(81d:93066)**
See also **Szpirglas, Jacques, (81c:60056)**
Runggaldier, Wolfgang J. *See* **Di Masi, Giovanni B., (81m:93075)**
Stear, Edwin B. *See* **Johnson, Carl, (81d:93064)**
Szpirglas, Jacques (*with* Mazziotto, Gérald) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. **(81c:60056)**
See also **Mazziotto, Gérald, (81d:93066)**

60G40 Stopping times; optimal stopping problems; gambling theory [See also 62L15.]

Berti, Patrizia (*with* Crescioli, Marco) Some remarks on monotone gambling houses. (Italian summary) **81f:60062**
Bismut, Jean-Michel Temps d'arrêt optimal, quasi-temps d'arrêt et retournement du temps. (English summary) **81d:60052**
Bojdecki, Tomasz Probability maximizing approach to optimal stopping and its application to a disorder problem. **81c:60057**
Chow, Y. S. (*with* Cuzick, Jack) Moment conditions for the existence and nonexistence of optimal stopping rules for S_n/n^1. **81c:60058**
Ciesielski, Z. (*with* Zabczyk, Jerzy) A note on a selection problem. **81b:60041**
Crescioli, Marco *See* **Berti, Patrizia, 81f:60062**
Cuzick, Jack *See* **Chow, Y. S., 81c:60058**
El Karoui, Nicole Arrêt optimal prévisible. **81a:60055**
Engelbert, Alfred (*with* Engelbert, Hans-Jürgen) Optimal stopping and almost sure convergence of random sequences. **81a:60056**
(*with* Engelbert, Hans-Jürgen) Über Eigenschaften der Wertfunktion s beim Problem des optimalen Stoppens von Markov-Prozessen. (Russian and English summaries) **81m:60076**
Engelbert, Hans-Jürgen *See* **Engelbert, Alfred, 81a:60056** *and* **Engelbert, Alfred, 81m:60076**
Hisano, Hiroshi An existence theorem in a vector-valued optimal stopping problem. **81g:60045**
Irle, Albrecht On the best choice problem with random population size. (German summary) **81k:60051**
Kohlmann, Michael (*with* Rishel, Raymond) A variational inequality for a partially observed stopping time problem. **81e:60046**
Krylov, N. V. Control of the diffusion type processes. **81e:60047**
Kurtz, Thomas G. The optional sampling theorem for martingales indexed by directed sets. **81f:60063**
Maingueneau, M. A. Temps d'arrêt optimaux et théorie générale. **81j:60055**
Nisio, Makiko On nonlinear semigroups for Markov processes associated with optimal stopping. **81a:60057**
Novikov, A. A. On stopping times of semistable diffusion processes. (Russian) **81j:60056**
Pintacuda, N. Coupons collectors via the martingales. (Italian summary) **81d:60053**
Rishel, Raymond *See* **Kohlmann, Michael, 81e:60046**
Schmidt, Klaus D. On the value of a stopped set function process. **81i:60047**
Sierocński, Andrzej On the optimal choice from a sample drawn from a known distribution. **81k:60052**
Subelman, Eduardo J. The dependence of betting strategies on the probability of winning. **81c:60059**
Tamaki, Mitsushi Recognizing both the maximum and the second maximum of a sequence. **81a:60058**
Zabczyk, Jerzy *See* **Ciesielski, Z., 81b:60041**

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Anulova, S. V. Control of a Wiener process in a half-plane with an oblique reflection on the boundary. (Russian. English summary) **(81i:60073)**
Azlarov, T. A. (*with* Satubaldyev, D.) Stopping a Brownian motion at a random time. (Russian) **(81j:60089)**
Bartoszyński, Robert (*with* Govindarajulu, Z.) The secretary problem with interview cost. **(81m:62153)**
Bellow, Alexandra Sufficiently rich sets of stopping times, measurable cluster points and submartingales. **(81m:60077)**
Bismut, Jean-Michel Potential theory in optimal stopping and alternating processes. **(81d:60074)**
Charrier, Pierre Système complémentaire pour un problème unilatéral d'évolution: application au problème de temps d'arrêt. **(81i:31017)**
Chen, Wen Chen (*with* Starr, Norman) Optimal stopping in an urn. **(81j:62168)**
Dellacherie, C. Convergence en probabilité et topologie de Baxter-Chacon. **(81m:60010)**
Denardo, Eric V. (*with* Rothblum, Uriel G.) Optimal stopping, exponential utility, and linear programming. **(81b:90148)**
Dubuc, Serge ★Problèmes d'optimisation en calcul des probabilités. (French) [Optimization problems in the theory of probabilities] **(81a:60002)**
Fleming, Wendell H. Measure-valued processes in the control of partially-observable stochastic systems. **(81e:93075)**
Govindarajulu, Z. *See* **Bartoszyński, Robert, (81m:62153)**
Hoffmann-Ostenhof, M. (*with* Hoffmann-Ostenhof, Thomas; Simon, B.) Brownian motion and a consequence of Harnack's inequality: nodes of quantum wave functions. **(81g:81019)**
Hoffmann-Ostenhof, Thomas *See* **Hoffmann-Ostenhof, M.; et al., (81g:81019)**
Krylov, N. V. General methods for the estimation of the derivatives of payoff functions. (Russian) **(81c:93074)**
Licea, Gabriela On the projections of stochastic processes. **(81a:60049)**
Lions, Pierre-Louis Some problems related to the Bellman-Dirichlet equation for two operators. **(81k:35046)**
Meyer, P. A. Convergence faible et compacité des temps d'arrêt d'après Baxter et Chacon. **(81m:60009)**
Millet, Annie (*with* Sucheston, Louis) A characterization of Vitali conditions in terms of maximal inequalities. **(81g:60052)**
Rosén, Bengt A tool for derivation of asymptotic results for sampling and occupancy problems, illustrated by its application to some general capture-recapture sampling problems. **(81h:62021)**
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Satubaldyev, D. *See* **Azlarov, T. A., (81j:60089)**
Simon, B. *See* **Hoffmann-Ostenhof, M.; et al., (81g:81019)**
Starr, Norman *See* **Chen, Wen Chen, (81j:62168)**
Sucheston, Louis *See* **Millet, Annie, (81g:60052)**
Yamada, Keigo Examples of optimal stopping problems for jump processes. **(81d:62085)**

60G42 Martingales with discrete parameter

Chen, Louis H. Y. Martingale transform and random Abel-Dini series. **81j:60057**
Costé, Alain Sur les martingales multivoques. (English summary) **81i:60048**
Dor, Leonard E. Some inequalities for martingales and applications to the study of L_1. **81k:60053**
Dubins, Lester E. (*with* Pitman, Jim) A divergent, two-parameter, bounded martingale. **81k:60060**
Kazamaki, Norihiko On transforming the class of BMO-martingales by a change of law. **81c:60060**
Changes of law, martingales and the conditioned square function. **81c:60061**
Kudžma, R. Remarks on supermartingales. (Russian. Lithuanian and English summaries) **81g:60046**
Long, Rui Lin Martingales régulières et Φ-inégalités avec poids entre f^*, $S(f)$ et $\sigma(f)$. (English summary) **81k:60054**
Pavlov, I. V. A counterexample to the conjecture that H^∞ is dense in the space BMO. (Russian. English summary) **81j:60058**
Pitman, Jim *See* **Dubins, Lester E., 81k:60060**
Rao, M. M. Non-L^1-bounded martingales. **81i:60049**
Rebolledo, Rolando Semi-martingales et variations quadratiques. Conditions nécessaires et suffisantes de convergence en loi vers une martingale gaussienne. (English summary) **81f:60064**

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Engelbert, Hans-Jürgen *See* **Engelbert, Alfred, (81a:60056)**
Gundy, Richard F. Local convergence of a class of martingales in multidimensional time. **(81g:60055)**
Helland, Inge S. On weak convergence to Brownian motion. **(81j:60045)**
Heyde, C. C. A log log improvement to the Riemann hypothesis for the Hawkins random sieve. **(81h:60039)**
Izumisawa, Masataka Weighted norm inequality for operator on martingales. **(81f:60071)**
Jacod, Jean ★Calcul stochastique et problèmes de martingales. (French) [Stochastic calculus and martingale problems] **(81e:60053)**
Kurtz, Thomas G. The optional sampling theorem for martingales indexed by directed sets. **(81f:60063)**
Morozova, L. N. *See* **Volodin, N. A., (81g:60027)**
Musiał, Kazimierz Martingales of Pettis integrable functions. **(81m:28011)**
Nguyen Duy Tien Sur le théorème des trois séries de Kolmogorov et la convergence en moyenne quadratique des martingales dans un espace de Banach. (Russian summary) **(81b:60010)**
Peligrad, Magda Local convergence for sums of dependent random variables and the law of large numbers. **(81f:60047)**
Pinelis, I. F. Estimates for moments of infinite-dimensional martingales. (Russian) **(81k:60012)**
Pintacuda, N. Coupons collectors via the martingales. (Italian summary) **(81d:60053)**
Pitman, Jim *See* **Dubins, Lester E., (81f:60027)**
Prakasa Rao, B. L. S. On central limit theorems, invariance principle and rates of convergence for backwards martingale arrays. (Lithuanian and Russian summaries) **(81d:60033)**
Scott, D. J. *See* **Adler, Robert J., (81h:60027)**
Sims, Bailey A geometric proof for some simple cases of martingale convergence. **(81g:46056)**
Volodin, N. A. (*with* Morozova, L. N.) Some estimates of probabilities of large deviations for martingales and sums of random vectors. (Russian) **(81g:60027)**
Weber, N. C. A martingale approach to central limit theorems for exchangeable random variables. **(81m:60042)**

60G44 Martingales with continuous parameter

(Azéma, Jacques) *See* **Temps locaux, 81b:60042**
Bellow, Alexandra Sufficiently rich sets of stopping times, measurable cluster points and submartingales. **81m:60077**
Benyamini, Yoav (*with* Ghoussoub, Nassif A.) Une caractérisation probabiliste de l^1. (English summary) **81e:60048**
Bojdecki, Tomasz On asymptotic behaviour of local martingales. **81c:60062**
Chevalier, Lucien Variation quadratique, calcul stochastique et inégalités de norme pour les martingales continues à deux paramètres. (English summary) **81f:60065**
Chou, Ching Sung Caractérisation d'une classe de semimartingales. **81m:60078**
Dellacherie, C. (*with* Meyer, P. A.) À propos du travail de Yor sur le grossissement des tribus. **81g:60047**
Emery, M. Une topologie sur l'espace des semimartingales. **81h:60061**
Un théorème de Vitali-Hahn-Saks pour les semimartingales. (English summary) **81k:60062**
Erlov, M. P. Causal and nonanticipating solutions of stochastic equations. **81i:60050**
Fischer, Hans Jürgen Expansion of local martingales in orthogonal series. (Russian) **81m:60079**
Fleming, Wendell H. (*with* Viot, Michel) Some measure-valued Markov processes in population genetics theory. **81a:60059**
Fouque, Jean-Pierre (*with* Millet, Annie) Régularité à gauche des martingales fortes à plusieurs indices. (English summary) **81e:60049**
Ghoussoub, Nassif A. *See* **Benyamini, Yoav, 81e:60048**
Grigelionis, B. (*with* Mikulevičius, R.) Semimartingales with values in $\mathbf{R}^m_\natural$. (Russian. Lithuanian and English summaries) **81c:60063**
Guyon, Xavier (*with* Prum, Bernard) Formule de Itô pour des martingales faibles sur $\mathbf{R}^2$. Fonctions harmoniques faibles. Applications. (English summary) **81e:60050**
(*with* Prum, Bernard) Identification et estimation d'un modèle de semi-martingale à indice dans $\mathbf{R}^2_\natural$. (English summary) **81f:60066**
Hadžiev, D. I. *See* **Minkova, L. D., 81g:60050**
Heinich, Henri Convergence des sous-martingales positives dans un Banach réticulé. (English summary) **81e:60051**
Izumisawa, Masataka (*with* Sekiguchi, Takeshi) Weighted norm inequalities for martingales. **81m:60080**
(*with* Sekiguchi, Takeshi; Shiota, Yasunobu) Remark on a characterization of BMO-martingales. **81h:60063**
Jacod, Jean Sous-espaces stables de martingales. **81e:60052**
★Calcul stochastique et problèmes de martingales. (French) [Stochastic calculus and martingale problems] **81e:60053**
Jeulin, T. Comportement des semi-martingales dans un grossissement de filtration. **81i:60051**
Kazamaki, Norihiko (*with* Sekiguchi, Takeshi) On the transformation of some classes of martingales by a change of law. **81f:60067**
Transformation of H^p-martingales by a change of law. **81g:60048**
A remark on a weighted norm inequality for martingales. **81k:60055**
Kussmaul, A. U. Representation of Banach space valued quasimartingales by real quasimartingales. **81m:60081**
Lépingle, D. Sur le comportement asymptotique des martingales locales. **81g:60049**
Merzbach, Ely Une remarque sur les martingales à deux indices et leurs mesures de Doléans associées. (English summary) **81b:60043**
Meyer, P. A. Martingales locales fonctionnelles additives. I. **81j:60059a**
Martingales locales fonctionnelles additives. II. **81j:60059b**
Caractérisation des semimartingales, d'après Dellacherie. **81c:60064**
See also **Dellacherie, C., 81g:60047**
Mikulevičius, R. *See* **Grigelionis, B., 81c:60063**
Millet, Annie *See* **Fouque, Jean-Pierre, 81e:60049**
Minkova, L. D. (*with* Hadžiev, D. I.) Theorem of Girsanov's type for Gaussian martingales. **81g:60050**
Morimoto, Hiroaki Existence of optimal martingales. **81b:60044**
Novikov, A. A. Conditions for uniform integrability of continuous nonnegative martingales. (Russian. English summary) **81f:60068**
Nualart Rodón, David (*with* Sanz, Marta) Caractérisation des martingales à deux paramètres indépendantes du chemin. **81k:60056**
Pratelli, Maurizio Le support exact du temps local d'une martingale continue. **81m:60082**
Prum, Bernard *See* **Guyon, Xavier, 81e:60050** *and* **Guyon, Xavier, 81f:60066**
Rebolledo, Rolando Sur l'existence de solutions à certains problèmes de semimartingales. (English summary) **81f:60069**
Sanz, Marta *See* **Nualart Rodón, David, 81k:60056**
Sekiguchi, Takeshi *See* **Kazamaki, Norihiko, 81f:60067; Izumisawa, Masataka; et al., 81h:60063** *and* **Izumisawa, Masataka, 81m:60080**
Shiota, Yasunobu *See* **Izumisawa, Masataka; et al., 81h:60063**
Taraskin, A. F. Limit distributions of martingales. (Russian) **81h:60064**
Viot, Michel *See* **Fleming, Wendell H., 81a:60059**
Yor, Marc Convergence de martingales dans L^1 et dans H^1. (English summary) **81e:60054**
Les filtrations de certaines martingales du mouvement brownien dans $\mathbf{R}^n$. **81b:60045**
Sur l'étude des martingales continues extrêmales. **81c:60065**
Les inégalités de sous-martingales, comme conséquences de la relation de domination. **81i:60052**
See also **Temps locaux, 81b:60042**
Astérisque ★Temps locaux. (French) [Local times] **81b:60042**
Local time ★Temps locaux. (French) [Local times] **81b:60042**
Paris ★Temps locaux. (French) [Local times] **81b:60042**
Séminaire:
J. Azéma-M. Yor ★Temps locaux. (French) [Local times] **81b:60042**
Temps locaux ★Temps locaux. (French) [Local times] **81b:60042**

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Artzig, Jutta (*with* Zschiesche, Hans-Ullrich) Nichtnegative Supermartingale und Martingale. Eine Verallgemeinerung des Satzes von Girsanow. **(81e:60064)**
Bass, Richard F. The martingales of an independent increment process. **(81m:60139)**
Bismut, Jean-Michel Formulation géométrique du calcul de Itô, relèvement de connexions et calcul des variations. (English summary) **(81b:60052)**
Flots stochastiques et formule de Itô-Stratonovitch généralisée. (English summary) **(81d:60058)**
Bose, A. (*with* Dawson, Donald A.) A class of measure-valued Markov processes. **(81g:60079)**
Brennan, Michael D. Planar semimartingales. **(81b:60050)**
Cocozza, Christiane (*with* Kipnis, Claude) Processus de vie et de mort sur **R** avec interaction selon les particules les plus proches. **(81f:60138)**
Dawson, Donald A. Critical behavior of the geostochastic logistic system. **(81g:60078)**
Geostochastic calculus. (French summary) **(81g:60076)**
Stochastic measure diffusion processes. **(81g:60077)**
See also **Bose, A., (81g:60079)**
Dubins, Lester E. (*with* Pitman, Jim) A divergent, two-parameter, bounded martingale. **(81h:60060)**
Eisele, Th. A nonlinear martingale problem. **(81f:60112)**
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Kabanov, Ju. M. (*with* Lipcer, R. Š.; Širjaev, A. N.) Representation of integer-valued

random measures and local martingales by means of random measures with deterministic compensators. (Russian) **(81f:60076)**

Kipnis, Claude *See* **Cocozza, Christiane, (81f:60138)**

Kurtz, Thomas G. The optional sampling theorem for martingales indexed by directed sets. **(81f:60063)**

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Métivier, M. (*with* Pellaumail, Jean) On a stopped Doob's inequality and general stochastic equations. **(81h:60087)**

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Michel, Dominique Bimartingales invariantes sous l'action d'une application pseudo-conforme et fonctions pluriharmoniques. (English summary) **(81g:60057)**

Pellaumail, Jean *See* **Métivier, M., (81h:60087)**

Pitman, Jim *See* **Dubins, Lester E., (81h:60060)**

Rebolledo, Rolando La méthode des martingales appliquée à l'étude de la convergence en loi de processus. **(81g:60002)**

Central limit theorems for local martingales. **(81g:60023)**

Sen, Pranab Kumar (*with* Tsong, Y.) On functional central limit theorems for certain continuous time parameter stochastic processes. **(81m:60052)**

Širjaev, A. N. *See* **Kabanov, Ju. M.; et al., (81f:60076)**

Tsong, Y. *See* **Sen, Pranab Kumar, (81m:60052)**

Uppman, Are Deux applications des semi-martingales exponentielles aux équations différentielles stochastiques. (English summary) **(81d:60061)**

Zschiesche, Hans-Ullrich *See* **Artzig, Jutta, (81e:60064)**

60G46 Martingales and classical analysis

Bollobás, Béla Martingale inequalities. **81f:60070**

Doléans-Dade, C. (*with* Meyer, P. A.) Inégalités de normes avec poids. **81a:60060**

Izumisawa, Masataka Weighted norm inequality for operator on martingales. **81f:60071**

Meyer, P. A. *See* **Doléans-Dade, C., 81a:60060**

Schipp, Ferenc On Carleson's method. **81a:60061**

Schwartz, Laurent Martingales conformes sur une variété analytique complexe. **81m:60083**

Sekiguchi, Takeshi BMO-martingales and inequalities. **81a:60062**

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Davis, Burgess Hardy spaces and rearrangements. **(81h:42011)**

Kazamaki, Norihiko On transforming the class of BMO-martingales by a change of law. **(81c:60060)**

A remark on a weighted norm inequality for martingales. **(81k:60055)**

Lyons, Terry A definition of BMO_p for an abstract harmonic space and a John-Nirenberg theorem. **(81h:31022)**

Maurey, B. Isomorphismes entre espaces H_1. **(81m:46042)**

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Morimoto, Hiroaki Existence of optimal martingales. **(81b:60044)**

60G48 Generalizations of martingales

Bellow, Alexandra Several stability properties of the class of asymptotic martingales. **81m:60084**

(*with* Dvoretzky, A.) On martingales in the limit. **81h:60065**

Dvoretzky, A. *See* **Bellow, Alexandra, 81h:60065**

Edgar, G. A. Uniform semiamarts. **81e:60055**

Emery, M. (*with* Stricker, C.) Démonstration élémentaire d'un résultat d'Azéma et Jeulin. **81m:60085**

Grigelionis, B. Canonical form and local characteristics of semimartingales. **81f:60072**

Guyon, Xavier (*with* Prum, Bernard) Différents types de variations-produit pour une semi-martingale représentable à deux paramètres. (English summary) **81d:60054**

Manija, M. G. δ-martingales and their sets of convergence. (Russian. Georgian and English summaries) **81m:60086**

Millet, Annie (*with* Sucheston, Louis) Classes d'amarts filtrants et conditions de Vitali. (English summary) **81e:60056**

(*with* Sucheston, Louis) A characterization of Vitali conditions in terms of maximal inequalities. **81g:60052**

(*with* Sucheston, Louis) Convergence of classes of amarts indexed by directed sets. **81g:60051**

Prum, Bernard *See* **Guyon, Xavier, 81d:60054**

Schmidt, Klaus D. Théorèmes de structure pour les amartingales en processus de fonctions d'ensembles à valeurs dans un espace de Banach. (English summary) **81f:60073**

Théorèmes de convergence pour les amartingales en processus de fonctions d'ensembles à valeurs dans un espace de Banach. (English summary) **81h:60066**

Stricker, C. *See* **Emery, M., 81m:60085**

Sucheston, Louis *See* **Millet, Annie, 81e:60056; Millet, Annie, 81g:60051** *and* **Millet, Annie, 81g:60052**

Uhl, J. J., Jr. Pettis mean convergence of vector-valued asymptotic martingales. **81k:60057**

Wong, Eugene A calculus of multiparameter martingales and its applications. **81d:60055**

secondary classifications:

(Azéma, Jacques) *See* **Temps locaux, (81b:60042)**

Boel, René (*with* Kohlmann, Michael) Semimartingale models of stochastic optimal control, with applications to double martingales. **(81k:93077)**

Burkholder, D. L. Weak inequalities for exit times and analytic functions. **(81d:60080)**

Chaleyat-Maurel, M. (*with* Yor, Marc) Les filtrations de $|X|$ et X^+, lorsque X est une semi-martingale continue. (*See* **81b:60042**)

El Karoui, Nicole Sur les montées des semi-martingales. Le cas non continu. (*See* **81b:60042**)

Sur les montées des semi-martingales. (*See* **81b:60042**)

Fouque, Jean-Pierre (*with* Millet, Annie) Régularité à gauche des martingales fortes à plusieurs indices. (English summary) **(81e:60049)**

Guyon, Xavier (*with* Prum, Bernard) Formule de Itô pour des martingales faibles sur $\mathbf{R}^2$. Fonctions harmoniques faibles. Applications. (English summary) **(81e:60050)**

Kohlmann, Michael *See* **Boel, René, (81k:93077)**

Millet, Annie *See* **Fouque, Jean-Pierre, (81e:60049)**

Prum, Bernard *See* **Guyon, Xavier, (81e:60050)**

Yor, Marc Un exemple de processus qui n'est pas une semi-martingale. (*See* **81b:60042**)

Sur la continuité des temps locaux associés à certaines semi-martingales. (*See* **81b:60042**)

See also **Chaleyat-Maurel, M., (*See* 81b:60042)** *and* **Temps locaux, (81b:60042)**

Astérisque ★Temps locaux. (French) [Local times] **(81b:60042)**

Local time ★Temps locaux. (French) [Local times] **(81b:60042)**

Paris ★Temps locaux. (French) [Local times] **(81b:60042)**

Séminaire:

J. Azéma-M. Yor ★Temps locaux. (French) [Local times] **(81b:60042)**

Temps locaux ★Temps locaux. (French) [Local times] **(81b:60042)**

60G50 Sums of independent random variables

Aaronson, Jonathan Sur le jeu de Saint-Pétersbourg. (English summary) **81e:60057**

Anan'evskiĭ, S. M. Analogues of Kesten's inequality for concentration functions. (Russian. English summary) **81j:60060**

Chang, I Shou (*with* Hsiung, Chao Agnes) On the uniform integrability of $|b^{-1/p}W_{M_b}|^p$, $0<p<2$. **81m:60087**

van Goethem, P. (*with* Goovaerts, Marc) Approximation formulae for compound Poisson processes for a kind of claim distributions having a prescribed asymptotic behavior. **81b:60046**

Goovaerts, Marc *See* **van Goethem, P., 81b:60046**

Hsiung, Chao Agnes *See* **Chang, I Shou, 81m:60087**

Suzuki, Giitiro On a stochastic game with one-chance recovery. **81h:60067**

secondary classifications:

Fernholz, Luisa Turrin (*with* Teicher, Henry) Stability of random variables and iterated logarithm laws for martingales and quadratic forms. **(81j:60037)**

Gafurov, M. U. An application of an analogue of an inequality of S. V. Nagaev and D. H. Fuk for weighted sums of independent random variables to the law of large numbers. (Russian) **(81c:60034)**

Behavior of sums of independent random variables with regularly varying tails. (Russian) **(81m:60045)**

Gut, Allan Convergence rates for probabilities of moderate deviations for sums of random variables with multidimensional indices. **(81c:60035)**

Hall, Peter On the limiting behaviour of the mode and median of a sum of independent random variables. **(81h:60029)**

Jain, Naresh C. (*with* Orey, Steven) Domains of partial attraction and tightness conditions. **(81m:60035)**

Kl'osov, O. I. A strong law of large numbers for random fields with independent values. (Russian. English summary) **(81c:60036)**

Maller, R. A. Relative stability, characteristic functions and stochastic compactness. **(81e:60020)**

On one-sided boundedness of normed partial sums. **(81j:60039)**

An extension of Kesten's generalised law of the iterated logarithm. **(81j:60040)**

On the law of the iterated logarithm in the infinite variance case. **(81j:60041)**

Mogyoródi, J. On an inequality of Marcinkiewicz and Zygmund. **(81f:60028)**

Muhin, A. B. Smoothing of compositions of distributions. (Russian) **(81d:60032)**

Orey, Steven *See* **Jain, Naresh C., (81m:60035)**

Paditz, Ludwig Über eine Fehlerabschätzung im zentralen Grenzwertsatz. **(81e:60021)**

Rychlik, Zdzisław (*with* Szynal, Dominik) On the rate of convergence in the central limit theorem. **(81c:60029)**

Sarapa, Nikola A note on the law of large numbers. (Serbo-Croatian summary) **(81c:60039)**

Shore, Terence R. On the local limit theorem for independent nonlattice random variables. **(81h:60035)**

Sweeting, T. J. Speeds of convergence and asymptotic expansions in the central limit theorem: a treatment by operators. **(81f:60039)**

Szynal, Dominik *See* **Rychlik, Zdzisław, (81c:60029)**

Teicher, Henry *See* **Fernholz, Luisa Turrin, (81j:60037)**

Watanabe, Shinzo A limit theorem for sums of i.i.d. random variables with slowly varying tail probability. **(81h:60025)**

60G55 Point processes

Banis, R. The convergence of superpositions of integer-valued random measures. (Russian. Latvian and English summaries) **81a:60063**

Limit theorems for superpositions of multidimensional integer-valued random processes. (Russian. Latvian and English summaries) **81a:60064**

Battaglia, Francesco *See* **Orsingher, Enzo, 81f:60075**

Ćwik, Jan *See* **Kowalczyk, Teresa; et al., 81m:60088**

Fichtner, Karl-Heinz (*with* Kerstan, Johannes) Approximation von Mischungen

Poissonscher Punktprozesse durch verschobene Punktprozesse. **81b:60047**
(*with* Freudenberg, W.; Kerstan, Johannes) Abhängige Verschiebungen. III. **81e:60058c**
Abhängige Verschiebungen von Punktprozessen. I. **81e:60058a**
Abhängige Verschiebungen von Punktprozessen. II. **81e:60058b**
Freudenberg, W. *See* **Fichtner, Karl-Heinz; et al., 81e:60058c**
Isham, Valerie (*with* Westcott, Mark) A self-correcting point process. **81a:60065**
Kallenberg, Olav On the structure of stationary flat processes. II. **81j:60061**
Kerstan, Johannes *See* **Fichtner, Karl-Heinz, 81b:60047** *and* **Fichtner, Karl-Heinz; et al., 81e:60058c**
Kowalczyk, Teresa (*with* Ćwik, Jan; Pleszczyńska, Elżbieta) Chronological ordering of Poisson streams. **81m:60088**
Lawrance, A. J. (*with* Lewis, Peter A. W.) The exponential autoregressive-moving average EARMA(p,q) process. **81i:60053**
Lewis, Peter A. W. *See* **Lawrance, A. J., 81i:60053**
Lin, T. F. A characterization of Poisson processes. **81e:60059**
Nguyen-van-Hun A limit theorem for functionals of a Poisson process. **81e:60060**
Oakes, David Matched pairs in independent Poisson processes. **81i:60054**
Orsingher, Enzo (*with* Battaglia, Francesco) Record values in Poisson and randomized Poisson models. (French summary) **81f:60075**
Pleszczyńska, Elżbieta *See* **Kowalczyk, Teresa; et al., 81m:60088**
Radecke, Wolfgang Über eine spezielle Klasse abhängiger Verschiebungen Poissonscher Punktprozesse. **81i:60055**
(Spitzer, Frank) *See* **Fichtner, Karl-Heinz; et al., 81e:60058c**
Stoyan, Dietrich Interrupted point processes. (German and Russian summaries) **81b:60048**
Thiele, Bärbel Eine Umkehrformel für einfache stationäre Punktprozesse endlicher Intensität im $\mathbf{R}^s$. **81g:60053**
Westcott, Mark *See* **Isham, Valerie, 81a:60065**
Zähle, U. A class of random dependent shifts leaving recurrent point processes invariant. (Russian. Lithuanian and English summaries) **81f:60074**
Zeephongsekul, P. Some results concerning the entropy of a point process. **81j:60062a**
A note on the upper bound for the difference between two entropies. **81j:60062b**
Generalized entropy of deleted point processes. **81d:60056**
(Zessin, Hans) *See* **Fichtner, Karl-Heinz; et al., 81e:60058c**

secondary classifications:

Berbee, Henry C. P. ★Random walks with stationary increments and renewal theory. **(81e:60093)**
Besson, Jean-Luc Intensité et mesure de Palm du processus ponctuel des passages par un niveau de certaines fonctions aléatoires. (English summary) **(81m:60065)**
Biswas, Suddhendu (*with* Nauhria, Indu) A note on the development of some interrupted waiting time distributions. **(81f:60118)**
Brillinger, David R. Analyzing point processes subjected to random deletions. (French summary) **(81b:62110)**
Brown, Mark Bounds, inequalities, and monotonicity properties for some specialized renewal processes. **(81d:60093)**
Cowan, Richard Further results on single-lane traffic flow. **(81j:90050)**
Debes, Hermann (*with* Zähle, U.) Some transformations of renewal processes. **(81d:60029)**
Fichtner, Karl-Heinz Stationäre Folgen von Zufallsvariablen als Lösung unendlicher Gleichungssysteme. **(81d:60043)**
Glötzl, E. On the singularity of (Σ) point processes. **(81h:60055)**
Griffiths, R. C. (*with* Milne, R. K.; Wood, R.) Aspects of correlation in bivariate Poisson distributions and processes. **(81e:62066)**
Ito, Yoshifusa Renewal processes decomposable into i.i.d. components. **(81j:60096)**
Jacobs, Patricia A. (*with* Lewis, Peter A. W.) Discrete time series generated by mixtures. I. Correlational and runs properties. **(81c:62103a)**
(*with* Lewis, Peter A. W.) Discrete time series generated by mixtures. II. Asymptotic properties. **(81c:62103b)**
Kabanov, Ju. M. (*with* Lipcer, R. Š.; Širjaev, A. N.) Necessary and sufficient conditions for absolute continuity of measures corresponding to point (counting) processes. **(81j:60052)**
König, Dieter (*with* Schmidt, Volker) Imbedded and nonimbedded stationary characteristics of queueing systems with varying service rate and point processes. **(81j:60107)**
Kutojanc, Ju. A. Intensity parameter estimation of an inhomogeneous Poisson process. (Russian. English summary) **(81k:62121)**
Lai, C. D. A note on central limit theorem for the Wold's Markov process of gamma intervals. **(81k:60035)**
Lewis, Peter A. W. *See* **Jacobs, Patricia A., (81c:62103a)** *and* **Jacobs, Patricia A., (81c:62103b)**
Lindgren, Georg Point processes of exits by bivariate Gaussian processes and extremal theory for the χ^2-process and its concomitants. **(81j:60048)**
Lindvall, T. An invariance principle for thinned random measures. **(81a:60066)**
Lipcer, R. Š. *See* **Kabanov, Ju. M.; et al., (81j:60052)**
Milne, R. K. *See* **Griffiths, R. C.; et al., (81e:62066)**
Nauhria, Indu *See* **Biswas, Suddhendu, (81f:60118)**
Pardoux, E. Filtering of a diffusion process with Poisson-type observation. **(81j:60054)**
Portal, Frédéric Théorème de grandes déviations pour des martingales et des processus ponctuels. (English summary) **(81h:60037)**
Ramaswami, V. The $N/G/1$ queue and its detailed analysis. **(81e:60103)**
Santaló, L. A. Random lines and tessellations in a plane. **(81e:60012)**
Schmidt, Volker *See* **König, Dieter, (81j:60107)**
Serfozo, Richard F. High-level exceedances of regenerative and semistationary processes. **(81h:60050)**
Širjaev, A. N. *See* **Kabanov, Ju. M.; et al., (81j:60052)**
Stoyan, Dietrich Applied stochastic geometry: a survey (invited paper). (German and Russian summaries) **(81h:60020)**
Proofs of some fundamental formulas of stereology for non-Poisson grain models. (German and Russian summaries) **(81d:60018)**
Szmitman, Alain-Sol Modèles stationnaires de files d'attente. (English summary) **(81e:60104)**
Weiss, P. On the singularity of Poisson processes. **(81h:60056)**
Wood, R. *See* **Griffiths, R. C.; et al., (81e:62066)**
Zähle, U. Asymptotic behavior of the flow of events of a Gaussian field. (Russian) **(81h:60073)**
See also **Debes, Hermann, (81d:60029)**

60G57 Random measures

Kabanov, Ju. M. (*with* Lipcer, R. Š.; Širjaev, A. N.) Representation of integer-valued random measures and local martingales by means of random measures with deterministic compensators. (Russian) **81f:60076**
Karr, Alan F. Correction to: "Lévy random measures" [Ann. Probab. **6** (1978), no. 1, 57–71; MR 56 #13355]. **81b:60049**
Lindvall, T. An invariance principle for thinned random measures. **81a:60066**
Lipcer, R. Š. *See* **Kabanov, Ju. M.; et al., 81f:60076**
Širjaev, A. N. *See* **Kabanov, Ju. M.; et al., 81f:60076**

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Banis, R. The convergence of superpositions of integer-valued random measures. (Russian. Latvian and English summaries) **(81a:60063)**
Fortet, R. Covariance des fonctions aléatoires réelles non négatives. (English summary) **(81m:60062)**
Kallenberg, Olav On the structure of stationary flat processes. II. **(81j:60061)**
Mori, Toshio A duality theorem for flows. **(81h:60047)**
Rosiński, Jan (*with* Suchanecki, Zdzisław) A Gaussian random integral of vector-valued functions. (Russian summary) **(81h:60078)**
Suchanecki, Zdzisław *See* **Rosiński, Jan, (81h:60078)**

60G60 Random fields

Bilyk, M. G. Some transformations of periodic inhomogeneous random fields. (Russian) **81h:60068**
Brennan, Michael D. Planar semimartingales. **81b:60050**
Dynkin, E. B. Markov processes and random fields. **81m:60089**
Evstigneev, I. V. (*with* Ovseevič, A. I.) Splitting times for random fields. (Russian. English summary) **81h:60069**
Fernique, Xavier L'ordre de grandeur à l'infini de certaines fonctions aléatoires. (English summary) **81g:60054**
Gundy, Richard F. Local convergence of a class of martingales in multidimensional time. **81g:60055**
Hsü, Shih Hsiung A simple proof of Chevet's theorem. **81j:60063**
Jurek, Paweł *See* **Sęsiada, Edward, 81h:60072**
Kawada, Takayuki Asymptotic behavior of the maxima over high levels for homogeneous Gaussian random fields. **81j:60064**
Körezlioğlu, Hayri (*with* Lefort, Pascal) Une propriété markovienne pour les processus à deux indices. (English summary) **81d:60057**
Künsch, H. Gaussian Markov random fields. **81g:60056**
Kusuoka, Shigeo Markov fields and local operators. **81h:60070**
Lefort, Pascal *See* **Körezlioğlu, Hayri, 81d:60057**
Ljal'ko, S. B. Sample mean of a homogeneous and isotropic field as a function of observations. (Russian. English summary) **81h:60071**
Michel, Dominique Bimartingales invariantes sous l'action d'une application pseudo-conforme et fonctions pluriharmoniques. (English summary) **81g:60057**
Molčan, G. M. Homogeneous random fields on symmetric spaces of rank one. (Russian. English summary) **81f:60077**
Nguyen, Xuan-Xanh (*with* Zessin, Hans) Ergodic theorems for spatial processes. **81e:60061**
Ovseevič, A. I. *See* **Evstigneev, I. V., 81h:60069**
Sanz Solé, Marta Stochastic differential calculus for processes with n-dimensional parameter. (Spanish) **81f:60078**
Sęsiada, Edward (*with* Jarek, Paweł) On the existence of random fields with prescribed conditional probabilities. **81h:60072**
Sinjavs'kiĭ, V. F. Modulus of continuity of sample functions of homogeneous Gaussian random fields. (Russian) **81a:60067**
Šujan, Štefan Ergodic theory and information in classical lattice systems. **81e:60062**
Szczepankiewicz, Eugeniusz Correlation functions of certain random fields. (Polish. English summary) **81m:60090**
Tempelmanas, A. A. Specific characteristics and a variational principle for homogeneous random fields. (Russian) **81m:60091**
Zähle, U. Asymptotic behavior of the flow of events of a Gaussian field. (Russian) **81h:60073**
Zerakidze, Z. S. Markov property of the solution of a stochastic differential equation of hyperbolic type. (Russian) **81c:60066**
Zessin, Hans *See* **Nguyen, Xuan-Xanh, 81e:60061**

secondary classifications:

Campanino, Massimo (*with* Capocaccia, D.; Tirozzi, Brunello) The local central limit theorem for a Gibbs random field. **(81e:60105)**
Capocaccia, D. *See* **Campanino, Massimo; et al., (81e:60105)**
Darroch, J. N. (*with* Lauritzen, Steffen L.; Speed, T. P.) Markov fields and log-linear interaction models for contingency tables. **(81i:62098)**
De Dominicis, Rodolfo Cumulants and the central limit theorem for random fields. (Italian. English summary) **(81b:60021)**
Deo, Chandrakant M. Strong laws of large numbers for weakly stationary random fields. **(81d:60038)**
Hoy, Ludwig Eine Bemerkung zur Stetigkeit zufälliger Felder. **(81e:60040)**

Hryniewicz, Z. An approximation of random field with a bounded discrete parameter space. **(81m:65015)**
Isakova, G. A. *See* **Žurbenko, I. G., (81m:62176)**
Jadrenko, M. I. *See* **Leonenko, M. M., (81g:60021)** *and* **(81j:60027)**
del Junco, Andrés Finitary coding of Markov random fields. **(81f:28022)**
Kalinauskaitė, N. The local growth of trajectories of random fields with independent increments. II. (Russian. Lithuanian and English summaries) **(81j:60085)**
Lauritzen, Steffen L. *See* **Darroch, J. N.; et al., (81i:62098)**
Leonenko, M. M. (*with* Jadrenko, M. I.) Limit distribution of a functional of a homogeneous random field. (Russian) **(81g:60021)**
(*with* Jadrenko, M. I.) The central limit theorem for a class of random fields. (Russian. English summary) **(81j:60027)**
Malyšev, V. A. One particle states and scattering theory for Markov processes. **(81e:60106)**
Móricz, Ferenc Exponential estimates for the maximum of partial sums. II. Random fields. **(81m:60029)**
Strong laws of large numbers for quasistationary random fields. **(81k:60041)**
Neuderhouser, Carla C. Convergence of block spins defined by a random field. **(81j:60032)**
Nghiêm Đăng Ngọc (*with* Yor, Marc) Champs markoviens et mesures de Gibbs sur **R**. (English summary) **(81g:60100)**
Nualart Rodón, David (*with* Sanz, Marta) A Markov property for two-parameter Gaussian processes. **(81i:60066)**
Rozanov, Ju. A. Stochastic Markovian fields. **(81h:60054)**
Sanz, Marta *See* **Nualart Rodón, David, (81i:60066)**
Speed, T. P. *See* **Darroch, J. N.; et al., (81i:62098)**
Sargalis, D. On trajectories of Gaussian Markov random fields. **(81h:60051)**
Tirozzi, Brunello *See* **Campanino, Massimo; et al., (81e:60105)**
Yor, Marc *See* **Nghiêm Đăng Ngọc, (81g:60100)**
Žurbenko, I. G. (*with* Isakova, G. A.) Gaussian smoothing of statistics for the spectral density of a homogeneous random field. (Russian. English summary) **(81m:62176)**

60G99 None of the above, but in this section

Akcoglu, Mustafa A. (*with* Krengel, Ulrich) Ergodic theorems for superadditive processes. **81i:60056**
Dębowski, Jacek Some piecewise monotonic transformations of quasidiffusion processes. **81m:60092**
Findelsen, Peter Asymptotic properties of a certain class of Bush-Mosteller learning models. **81m:60093**
Freedman, David A. A mixture of independent identically distributed random variables need not admit a regular conditional probability given the exchangeable σ-field. **81g:60058**
Gladka, O. M. (*with* Kozačenko, Ju. V.) The condition of uniform convergence of certain random series. (Russian) **81h:60074**
Johnson, Dudley Paul Hitting time distributions when $\Sigma X_k/d^k$ has a smooth density. **81c:60067**
Kozačenko, Ju. V. *See* **Gladka, O. M., 81h:60074**
Krengel, Ulrich *See* **Akcoglu, Mustafa A., 81i:60056**
Lawrance, A. J. The mixed exponential solution to the first-order autoregressive model. **81j:60065**
Maruthachalam, C. *See* **Sambandham, M., 81e:60063**
Płuciński, Edmund On a property of the sum of discrete stochastic processes. **81b:60051**
Pruscha, Helmut (*with* Theodorescu, Radu) Recurrence and transience for discrete parameter stochastic processes. **81a:60068**
Ronka-Chmielowiec, Wanda An approximation of a random process by elementary random processes. (Polish. Russian and English summaries) **81m:60094**
Sambandham, M. (*with* Maruthachalam, C.) On the number of real zeros of a random trigonometric polynomial. **81e:60063**
On the upper bound of the number of real roots of a random algebraic equation. **81k:60058**
Theodorescu, Radu *See* **Pruscha, Helmut, 81a:60068**
Vatutin, V. A. The distance to the nearest common ancestor in Bellman-Harris branching processes. (Russian) **81f:60079**

secondary classifications:

Chen, Wen De On estimates of correlation functions for a kind of binary sequences. **(81k:62102)**
Ciesielski, Z. Probabilistic and analytic formulas for the periodic splines interpolating with multiple nodes. **(81g:41018)**
Gopala Krishna, J. Power series in one or several complex variables with independent random coefficients. **(81e:32002)**
Gravereaux, J. B. (*with* Jacod, Jean) Sur la construction des classes de processus de Markov invariantes par changement de temps. **(81d:60071)**
Hatakeyama, K. *See* **Ohta, M.; et al., (81m:76034)**
Iwashige, H. *See* **Ohta, M.; et al., (81m:76034)**
Jacod, Jean *See* **Gravereaux, J. B., (81d:60071)**
Klawe, Maria M. Optimal strategies for a fair betting game. **(81c:90109)**
Ohta, M. (*with* Hatakeyama, K.; Iwashige, H.; Yoshino, N.) A statistical theory on the general random noise of arbitrary distribution type with quantitized level and its actual application. (German and French summaries) **(81m:76034)**
Picard, Philippe Applications of martingale theory to some epidemic models. **(81m:92046)**
Ruelle, David Ergodic theory of differentiable dynamical systems. **(81f:58031)**
Shapiro, Joel H. Zeros of random functions in Bergman spaces. (French summary) **(81h:30054)**
Yoshino, N. *See* **Ohta, M.; et al., (81m:76034)**

60Hxx Stochastic analysis [See also 58G32.]

secondary classifications:

Sargent, R. W. H. *See* **Virani, N. A. A., (*See* 81j:93069)**
Virani, N. A. A. (*with* Sargent, R. W. H.) A new approach to the theory of nonlinear stochastic systems. **(*See* 81j:93069)**

60H05 Stochastic integrals

Artzig, Jutta (*with* Zschiesche, Hans-Ullrich) Nichtnegative Supermartingale und Martingale. Eine Verallgemeinerung des Satzes von Girsanow. **81e:60064**
Bismut, Jean-Michel Formulation géométrique du calcul de Itô, relèvement de connexions et calcul des variations. (English summary) **81b:60052**
Flots stochastiques et formule de Itô-Stratonovitch généralisée. (English summary) **81d:60058**
Intégrales stochastiques non monotones et calcul différentiel stochastique. (English summary) **81f:60080**
Emery, M. Équations différentielles stochastiques lipschitziennes: étude de la stabilité. **81h:60075**
Enčev, O. B. *See* **Stojanov, Ĭordan M., 81g:60059**
Gaveau, Bernard Différentielle extérieure stochastique. (English summary) **81f:60081**
(*with* Trauber, Philip) L'intégrale stochastique comme opérateur de divergence dans l'espace de Fock. (English summary) **81j:60066**
Itô, Kiyosi Extension of stochastic integrals. **81f:60082**
Kallath, Thomas (*with* Segall, Adrian; Zakai, M.) Fubini-type theorems for stochastic integrals. **81j:60067**
Krener, Arthur J. A formal approach to stochastic integration and differential equations. **81e:60065**
Lin, T. F. Stochastic construction of new orthogonal polynomials. **81a:60069**
Malliavin, Paul Stochastic calculus of variation and hypoelliptic operators. **81f:60083**
Mémin, Jean Espaces de semi martingales et changement de probabilité. **81h:60076**
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Riedel, M. Determination of a stochastic process by means of stochastic integrals. (Russian summary) **81h:60077**
Rootzén, Holger Limit distributions for the error in approximations of stochastic integrals. **81e:60066**
Rosiński, Jan (*with* Suchanecki, Zdzisław) A Gaussian random integral of vector-valued functions. (Russian summary) **81h:60078**
Segall, Adrian *See* **Kallath, Thomas; et al., 81j:60067**
Ševljakov, A. Ju. Stochastic differentiation and integration of functionals of a Wiener process. (Russian) **81b:60053**
Shigekawa, Ichiro Absolute continuity of probability laws of Wiener functionals. **81m:60097**
Stojanov, Ĭordan M. (*with* Enčev, O. B.) Stochastic integrals for Gaussian random processes. **81g:60059**
Suchanecki, Zdzisław *See* **Rosiński, Jan, 81h:60078**
Trauber, Philip *See* **Gaveau, Bernard, 81j:60066**
Yoeurp, Ch. Sur la dérivation des intégrales stochastiques. **81m:60098**
Yor, Marc Quelques épilogues. **81f:60084**
Zakai, M. *See* **Kallath, Thomas; et al., 81j:60067**
Zschiesche, Hans-Ulrich *See* **Artzig, Jutta, 81e:60064**

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Bass, Richard F. The martingales of an independent increment process. **(81m:60139)**
Bose, A. (*with* Dawson, Donald A.) A class of measure-valued Markov processes. **(81g:60079)**
Cambanis, Stamatis *See* **Huang, Steel T., (81e:60038)**
Chevalier, Lucien Variation quadratique, calcul stochastique et inégalités de norme pour les martingales continues à deux paramètres. (English summary) **(81f:60065)**
Chojnowska-Michalik, Anna Stochastic differential equations in Hilbert spaces. **(81j:60068)**
Cocozza, Christiane (*with* Kipnis, Claude) Processus de vie et de mort sur **R** avec interaction selon les particules les plus proches. **(81f:60138)**
Dawson, Donald A. Critical behavior of the geostochastic logistic system. **(81g:60078)**
Geostochastic calculus. (French summary) **(81g:60076)**
Stochastic measure diffusion processes. **(81g:60077)**
See also **Bose, A., (81g:60079)**
Fenstad, Jens Erik Nonstandard methods in stochastic analysis and mathematical physics. **(81m:03075)**
Gaveau, Bernard (*with* Mazet, Edmond) Diffusion et intégration sur les espaces de lacets. (English summary) **(81d:58058)**
Gladka, O. M. (*with* Kozačenko, Ju. V.) Conditions for uniform convergence in probability of some stochastic integrals. (Russian) **(81f:60057)**
Grigelionis, B. Canonical form and local characteristics of semimartingales. **(81f:60072)**
Guyon, Xavier (*with* Prum, Bernard) Formule de Itô pour des martingales faibles sur $\mathbf{R}^2$. Fonctions harmoniques faibles. Applications. (English summary) **(81e:60050)**
(*with* Prum, Bernard) Différents types de variations-produit pour une semi-martingale représentable à deux paramètres. (English summary) **(81d:60054)**
Huang, Steel T. (*with* Cambanis, Stamatis) Gaussian processes: nonlinear analysis and stochastic calculus. **(81e:60038)**
Jacod, Jean ★Calcul stochastique et problèmes de martingales. (French) [Stochastic calculus and martingale problems] **(81e:60053)**
Jeulin, T. Comportement des semi-martingales dans un grossissement de filtration. **(81i:60051)**

Kabanov, Ju. M. (*with* Lipcer, R. Š.; Širjaev, A. N.) Representation of integer-valued random measures and local martingales by means of random measures with deterministic compensators. (Russian) **(81f:60076)**

Kipnis, Claude *See* **Cocozza, Christiane, (81f:60138)**

Kozačenko, Ju. V. *See* **Gladka, O. M., (81f:60057)**

Lipcer, R. Š. *See* **Kabanov, Ju. M.; et al., (81f:60076)**

Mazet, Edmond *See* **Gaveau, Bernard, (81d:58058)**

Michel, Dominique Régularité de lois conditionnelles en théorie du filtrage non linéaire. (English summary) **(81a:60054)**

Prum, Bernard *See* **Guyon, Xavier, (81d:60054)** *and* **Guyon, Xavier, (81e:60050)**

Riedel, M. Representation of the characteristic function of a stochastic integral. **(81h:60022)**

Širjaev, A. N. *See* **Kabanov, Ju. M.; et al., (81f:60076)**

Srinivasan, S. K. (*with* Udayabaskaran, S.) On a stochastic integral associated with a birth and death process. **(81m:60152)**

Udayabaskaran, S. *See* **Srinivasan, S. K., (81m:60152)**

Wong, Eugene A calculus of multiparameter martingales and its applications. **(81d:60055)**

Yor, Marc Les filtrations de certaines martingales du mouvement brownien dans $\mathbf{R}^n$. **(81b:60045)**

Sur l'étude des martingales continues extrêmales. **(81c:60065)**

60H10 Stochastic ordinary differential equations [See also 34F05.]

Adomian, G. New results in stochastic equations—the nonlinear case. **81d:60059**

Stochastic systems analysis. **81m:60099**

Babkin, G. I. (*with* Kljackin, V. I.) Towards an analysis of the Dyson equation for stochastic integral equations. (Russian. English summary) **81i:60057**

Bafico, Roberto On the convergence of the weak solutions of stochastic differential equations when the noise intensity goes to zero. (Italian summary) **81m:60100**

Boyce, William E. Applications of the Liouville equation. **81m:60101**

Car'kov, E. F. *See* **Sadovjak, A. M., 81b:60057**

Chojnowska-Michalik, Anna Stochastic differential equations in Hilbert spaces. **81j:60068**

Cikailo, T.-N. M. Random oscillations in essentially nonlinear nonautonomous stochastic systems. (Russian) **81h:60079**

Some stochastic differential equations that are close to exactly integrable equations. (Russian) **81i:60058**

Čitašvili, R. Ja. (*with* Torondžadze, T. A.) Local existence and uniqueness theorems and theorems on the continuation of strong solutions of stochastic equations with a unit diffusion coefficient. (Russian. Georgian and English summaries) **81m:60102**

See also **Lazrieva, N. L., 81m:60108**; **Torondžadze, T. A., 81m:60110** *and* **Torondžadze, T. A., 81m:60111**

Da Prato, Giuseppe Stochastic differential equations. (Italian) **81c:60068**

Devinatz, Allen (*with* Malliavin, Paul) On the possibility of defining the Chapman-Kolmogorov semigroup on L^∞. **81b:60054**

Freidlin, M. I. The averaging principle and theorems on large deviations. (Russian) **81h:60059**

See also **Ventcel', A. D., 81c:60072**

Gómez-Allende, M.ª Dolores Maravall A contribution to the theory of the stochastic pendulum. (Spanish. English summary) **81m:60103**

Has'minskiĭ, R. Z. On the reduction principle for systems of stochastic differential equations. (Russian. English summary) **81m:60104**

Hellmann, Ole J. (*with* van Kampen, N. G.) Stochastic nonlinear differential equations. II. **81j:60069**

Itô, Kiyosi (*with* Watanabe, Shinzo) Introduction to stochastic differential equations. **81b:60055**

Jacod, Jean Existence and uniqueness for stochastic differential equations. **81m:60105**

van Kampen, N. G. *See* **Hellmann, Ole J., 81j:60069**

Karatzas, Ioannis On a stochastic representation for the principal eigenvalue of a second-order differential equation. **81g:60060**

Kljackin, V. I. *See* **Babkin, G. I., 81i:60057**

Körezlioğlu, Hayri (*with* Mazziotto, Gérald) Sur des diffusions multidirectionnelles. (English summary) **81d:60060**

Kotani, Shinichi On a growth of solutions of second order linear differential equations with random coefficients. **81f:60085**

Kozin, Frank Stochastic differential equations—present knowledge and future problems. (Japanese) **81g:60061**

Kozobrod, V. N. (*with* Sabirov, T. S.) Extendability with respect to a parameter of periodically distributed solutions of differential equations in Banach spaces with random coefficients. (Russian) **81c:60069**

Kushner, Harold J. Approximation of solutions to differential equations with random inputs by diffusion processes. **81f:60086**

Jump-diffusion approximations for ordinary differential equations with wide-band random right-hand sides. **81e:60067**

Ladde, G. S. (*with* Lakshmikantham, V.) Stochastic differential inequalities of Itô type. **81m:60106**

Lakshmikantham, V. *See* **Ladde, G. S., 81m:60106**

Lax, Melvin D. Approximate solution of random differential and integral equations. **81m:60107**

Lazrieva, N. L. (*with* Čitašvili, R. Ja.) The construction of a strong solution of a stochastic differential equation under the condition of instantaneous reflection on the boundary. (Russian. Georgian and English summaries) **81m:60108**

Lebedev, V. A. The uniqueness of a relaxed solution of a system of stochastic differential equations. (Russian. English summary) **81h:60080**

Malliavin, Paul *See* **Devinatz, Allen, 81b:60054**

Mazziotto, Gérald *See* **Körezlioğlu, Hayri, 81d:60060**

Mel'nikov, A. V. Strong solutions of stochastic differential equations with nonsmooth coefficients. (Russian. English summary) **81m:60109**

Nakao, Shintaro (*with* Yamato, Yuiti) Approximation theorem on stochastic differential equations. **81h:60081**

Narita, Kiyomasa On asymptotic stability of solutions of linear stochastic differential equations. (Japanese summary) **81e:60068**

Pellaumail, Jean Solutions faibles pour des processus discontinus. (English summary) **81b:60056**

Pisanec, S. I. Strong convergence of the sequence of diffusion type processes. (Russian. English summary) **81g:60062**

Portenko, M. I. Stochastic differential equations with a generalized drift vector. (Russian. English summary) **81g:60063**

Prajneshu Two-species systems in random environment. **81h:60082**

Protter, Philip Stochastic differential equations with jump reflection at the boundary. **81f:60087**

Purkert, Walter (*with* vom Scheidt, Jürgen) Zur approximativen Lösung des Mittelungsproblems für die Eigenwerte stochastischer Differentialoperatoren. (English and Russian summaries) **81h:60083**

(*with* vom Scheidt, Jürgen) Ein Grenzverteilungssatz für stochastische Eigenwertprobleme. (English and Russian summaries) **81e:60069**

Rümelin, Werner Stability and growth of the solution of $\ddot{y} + f_t y = 0$ where f_t is a positive stationary Markov process. **81c:60070**

Sabirov, T. S. *See* **Kozobrod, V. N., 81c:60069**

Sadovjak, A. M. (*with* Car'kov, E. F.) The Cauchy matrix for a system of linear stochastic differential equations. (Russian) **81b:60057**

Šaiht, L. E. Equations for determining the moments of solutions of linear stochastic differential equations with aftereffect. (Russian) **81g:60064**

vom Scheidt, Jürgen *See* **Purkert, Walter, 81e:60069** *and* **Purkert, Walter, 81h:60083**

Schuss, Zeev Singular perturbation methods in stochastic differential equations of mathematical physics. **81g:60065**

Torondžadze, T. A. (*with* Čitašvili, R. Ja.) Stochastic differential equations with unit diffusion coefficient. Theorems on the existence and uniqueness of strong solutions. (Russian. Georgian and English summaries) **81m:60110**

(*with* Čitašvili, R. Ja.) The structure of the integral funnel of all solutions of stochastic differential equations with a unit diffusion coefficient. (Russian. Georgian and English summaries) **81m:60111**

See also **Čitašvili, R. Ja., 81m:60102**

Tran Van Nhung Liapunov's exponent of a stochastic process and the stability of the system of linear differential equations with random matrixes. **81c:60071**

Tudor, Constantin On the existence and the uniqueness of solutions to stochastic integral equations with two-dimensional time parameter. **81e:60070**

Some remarks on stochastic integral equations in the plane. **81e:60071**

Uppman, Are Deux applications des semi-martingales exponentielles aux équations différentielles stochastiques. (English summary) **81d:60061**

Ventcel', A. D. (*with* Freidlin, M. I.) ★Флуктуации в динамических системах под действием малых случайных возмущений. (Russian) [Fluctuations in dynamical systems subject to small random perturbations] **81c:60072**

Veretennikov, A. Ju. Strong solutions of stochastic differential equations. (Russian. English summary) **81b:60058**

Watanabe, Shinzo *See* **Itô, Kiyosi, 81b:60055**

Yamato, Yuiti *See* **Nakao, Shintaro, 81h:60081**

Yan, Jia An Sur une équation différentielle stochastique générale. **81m:60112**

Yoeurp, Ch. Solution explicite de l'équation $Z_t = 1 + \int_0^t |Z_s| dX_s$. **81m:60113**

Zanzotto, Pio Andrea Compacité en loi des solutions d'une famille d'équations stochastiques. (English summary) **81k:60060**

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Antonov, I. L. Properties with probability one of trajectories of a linear oscillator that is excited by a steady-state random force. (Russian. English summary) **(81g:70027)**

Borówko, Piotr An equation $dx/dt = f(x, t)$ whose trivial solution in spite of the strong stability is not mean square stable under persistent random disturbances from G. (Polish and Russian summaries) **(81g:34075a)**

Some remarks on the stability of ordinary differential equations under persistent random disturbances. (Polish and Russian summaries) **(81g:34075b)**

Chow, P. L. (*with* Saibel, E. A.) Analysis of a stochastic Reynolds equation and related problems. **(81h:76020)**

Curtain, Ruth F. Linear stochastic Itô equations in Hilbert space. **(81e:93095)**

Fox, Ronald Forrest Time ordered operator cumulants: statistical independence and noncommutativity. **(81a:82016)**

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Hamada, Yoshiyasu A method for solving a stochastic differential equation—an application to the kinetic Ising model with the external noise. **(81k:82004)**

Hrisanov, S. M. Characteristic indices in stochastic systems. (Russian) **(81d:34046)**

(*with* Ružnikov, G. M.) Stability of dynamical systems with random parameters. (Russian) **(81g:70028)**

Ivanov, M. F. (*with* Švec, V. F.) Numerical solution of stochastic differential equations for modeling collisions in a plasma. (Russian) **(81a:82018)**

Krener, Arthur J. A formal approach to stochastic integration and differential equations. **(81e:60065)**

Krylov, N. V. (*with* Rozovskiĭ, B. L.) Stochastic evolution equations. (Russian) **(81m:60116)**

Künlenz, J. An asymptotic method for constructing stochastic equations of oscillations of higher approximations and its application. (Russian) **(81i:34054)**

Laskin, N. V. *See* **Virčenko, Ju. P., (81d:60082)**

Marcus, Steven I. Modeling and analysis of stochastic differential equations driven by point processes. **(81e:93077)**

Mazziotto, Gérald *See* **Szpirglas, Jacques, (81c:60056)**

Muhitdinov, T. M. Random oscillations of systems with impulse action. (Russian) **(81e:34043)**

Narita, Kiyomasa On the law of the iterated logarithm for diffusion processes. (Japanese summary) **(81e:60085)**

Rao, A. N. V. (*with* Tsokos, Chris P.) Stability of McShane systems. **(81d:93070)**

Rozovskiĭ, B. L. *See* **Krylov, N. V., (81m:60116)**
Ruzikov, G. M. *See* **Hrisanov, S. M., (81g:70028)**
Salbel, E. A. *See* **Chow, P. L., (81h:76020)**
Schultz, George W. (*with* Tsokos, Chris P.) Stochastic combat modeling—Lanchester's first law. **(81i:90121)**
Švec, V. F. *See* **Ivanov, M. F., (81a:82018)**
Szpirglas, Jacques (*with* Mazziotto, Gérald) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. **(81c:60056)**
Tsokos, Chris P. *See* **Rao, A. N. V., (81d:93070)** *and* **Schultz, George W., (81i:90121)**
Tudor, Constantin Some examples of Markov processes with two-dimensional time parameter. **(81e:60082)**
An invariance principle for Markov processes with two-dimensional time parameter. **(81e:60083)**
Virčenko, Ju. P. (*with* Laskin, N. V.) Coarse-grained description of the distribution of solutions of the Langevin equation. (Russian. English summary) **(81d:60082)**

60H15 Stochastic partial differential equations [See also 35R60.]

Adomian, G. A constructive method for linear and nonlinear stochastic partial differential equations. **81g:60066**
(*with* Malakian, K.) Inversion of stochastic partial differential operators—the linear case. **81m:60114**
Chow, P. L. Approximate solution of random evolution equations. **81m:60115**
Da Prato, Giuseppe (*with* Iannelli, Mimmo; Tubaro, Luciano) Linear stochastic differential equations in Hilbert spaces. II. (Italian summary) **81j:60070**
Funaki, Tadahisa Construction of a solution of random transport equation with boundary condition. **81h:60084**
Gihman, Ĭ. Ĭ. A boundary value problem for a stochastic parabolic equation. (Russian) **81d:60062**
Iannelli, Mimmo *See* **Da Prato, Giuseppe; et al., 81j:60070**
Krylov, N. V. (*with* Rozovskiĭ, B. L.) Stochastic evolution equations. (Russian) **81m:60116**
Lukačer, B. Ja. Limit theorems for a class of stochastic differential equations of hyperbolic type. (Russian) **81e:60072**
Malakian, K. *See* **Adomian, G., 81m:60114**
Marcus, Robert Parabolic Itô equations with monotone nonlinearities. **81h:60085**
Stochastic diffusion on an unbounded domain. **81h:60086**
Matsuzawa, T. On a class of stochastic partial differential equations. **81m:60117**
Papanicolaou, George C. Stochastically perturbed bifurcation. **81m:60118**
Pardoux, E. Stochastic partial differential equations and filtering of diffusion processes. **81b:60059**
Ponomarenko, L. L. An infinite-dimensional stochastic Goursat problem. (Russian) **81b:60060**
Rozovskiĭ, B. L. *See* **Krylov, N. V., 81m:60116**
Shimizu, Akinobu Construction of a solution of linear stochastic evolution equations on a Hilbert space. **81f:60088**
Skorohod, A. V. Stochastic differential equations for quasidiffusion processes. (Russian) **81m:60119**
Tubaro, Luciano *See* **Da Prato, Giuseppe; et al., 81j:60070**

secondary classifications:

Abdullaev, F. H. (*with* Abdumalikov, A. A.; Rahmatov, A. S.) Solution of a nonlinear parabolic equation with random coefficients. (Russian) **(81m:35141)**
Abdumalikov, A. A. *See* **Abdullaev, F. H.; et al., (81m:35141)**
Adomian, G. Stochastic systems analysis. **(81m:60099)**
Azencott, R. Grandes déviations et applications. **(81m:58085)**
Beisenbaev, E. (*with* Kozačenko, Ju. V.) Uniform convergence in probability of random series, and solutions of boundary value problems with random initial conditions. (Russian. English summary) **(81g:60036)**
Benfatto, G. (*with* Cassandro, M.; Gallavotti, G.; Nicolò, F.; Olivieri, E.; Presutti, E.; Scacciatelli, E.) Some probabilistic techniques in field theory. **(81e:81081)**
Cassandro, M. *See* **Benfatto, G.; et al., (81e:81081)**
Chaturvedi, S. *See* **Gardiner, C. W.; et al., (81m:92019)**
Gallavotti, G. *See* **Benfatto, G.; et al., (81e:81081)**
Gardiner, C. W. (*with* Chaturvedi, S.; Walls, D. F.) Master equations, stochastic differential equations, and bifurcations. **(81m:92019)**
Hryčev, D. A. A homogeneous statistical solution for a nonlinear hyperbolic equation. (Russian. English summary) **(81g:35081)**
Jurinskiĭ, V. V. Averaging of an elliptic boundary value problem with random coefficients. (Russian) **(81k:35167)**
Kifer, Yuri On the principal eigenvalue in a singular perturbation problem with hyperbolic limit points and circles. **(81g:35006)**
Kozačenko, Ju. V. *See* **Beisenbaev, E., (81g:60036)**
Koziov, S. M. The averaging of random operators. (Russian) **(81m:35142)**
Kusuoka, Shigeo Markov fields and local operators. **(81h:60070)**
Mazziotto, Gérald *See* **Szpirglas, Jacques, (81e:60045)**
Mihackiĭ, N. A. Behavior of solutions of a stochastic system with lag. (Russian) **(81e:35123)**
Nicolò, F. *See* **Benfatto, G.; et al., (81e:81081)**
Olivieri, E. *See* **Benfatto, G.; et al., (81e:81081)**
Presutti, E. *See* **Benfatto, G.; et al., (81e:81081)**
Rahmatov, A. S. *See* **Abdullaev, F. H.; et al., (81m:35141)**
Sanz Solé, Marta Stochastic differential calculus for processes with n-dimensional parameter. (Spanish) **(81f:60078)**
Scacciatelli, E. *See* **Benfatto, G.; et al., (81e:81081)**
Sosinovič, V. A. Closed equation for the probability distribution of velocity and temperature differences between two points in an isotropically turbulent stream of an incompressible fluid. **(81e:76046)**
Szpirglas, Jacques (*with* Mazziotto, Gérald) A general nonlinear filtering model and associated stochastic differential equations. **(81e:60045)**
Walls, D. F. *See* **Gardiner, C. W.; et al., (81m:92019)**
Zerakidze, Z. S. Markov property of the solution of a stochastic differential equation of hyperbolic type. (Russian) **(81c:60066)**

60H20 Stochastic integral equations

Berger, Marc A. Positive kernels and stochastic integrals. **81c:60073**
Ito, Ichiro On the existence and uniqueness of solutions of stochastic integral equations of the Volterra type. **81b:60061**
Lewis, Marica On random integral equation of mixed type. (Romanian summary) **81k:60061**
Maluo, S. Ja. Stochastic equations of evolution type. (Russian) **81c:60074**
Mel'nikov, A. V. On the theory of stochastic equations with respect to components of semimartingales. (Russian) **81f:60089**
Métivier, M. (*with* Pellaumail, Jean) On a stopped Doob's inequality and general stochastic equations. **81h:60087**
Pellaumail, Jean *See* **Métivier, M., 81h:60087**
Römisch, Werner (*with* Schulze, Reinhard) Kennwertmethoden für stochastische Volterrasche Integralgleichungen. (Russian, English and French summaries) **81m:60120**
Schulze, Reinhard *See* **Römisch, Werner, 81m:60120**
Tanaka, Hiroshi On the uniqueness of Markov process associated with the Boltzmann equation of Maxwellian molecules. **81d:60063**
Wei, Duan Asymptotic properties of perturbed random Volterra integral equations. **81d:60064**

secondary classifications:

Emery, M. Une topologie sur l'espace des semimartingales. **(81h:60061)**
Équations différentielles stochastiques lipschitziennes: étude de la stabilité. **(81h:60075)**
Jacod, Jean Existence and uniqueness for stochastic differential equations. **(81m:60105)**
Kolomiĭc', V. G. Some methods for studying random oscillations. (Russian) **(81d:34047)**
Kusano, Shinako Dvoretzky processes in a Banach space and stochastic integral equations. (Japanese) **(81c:62095)**
Lax, Melvin D. Approximate solution of random differential and integral equations. **(81m:60107)**
Tudor, Constantin On the existence and the uniqueness of solutions to stochastic integral equations with two-dimensional time parameter. **(81e:60070)**
Some remarks on stochastic integral equations in the plane. **(81e:60071)**

60H25 Random operators and equations

Arnold, L. A new example of an unstable system being stabilized by random parameter noise. **81g:60067**
Baklan, V. V. A class of stochastic differential equations in a Hilbert space. (Russian) **81b:60062**
Bharucha-Reid, A. T. (*with* Kannan, Rangachary) Newton's method for random operator equations. **81m:60121**
Bilopol's'ka, Ja. Ĭ. The Cauchy problem for a class of integro-differential equations and systems in Hilbert space. (Russian) **81j:60071**
Bucan, G. P. A continuity condition for a stochastic semigroup. (Russian. English summary) **81h:60088**
See also **Bucan, S. P., 81a:60070**
Bucan, S. P. (*with* Bucan, G. P.) The regular relation between additive and multiplicative homogeneous stochastic semigroups. (Russian) **81a:60070**
Engl, Heinz W. Random fixed point theorems. **81b:60063**
Girko, V. L. Distribution of eigenvalues and eigenvectors of Hermitian random matrices. (Russian) **81h:60089**
Joshi, Mohan Measurability of inverses of random operators and existence theorems. **81k:60062**
Kannan, Rangachary *See* **Bharucha-Reid, A. T., 81m:60121**
Lee, A. C. H. (*with* Padgett, W. J.) Solution of random operator equations by random step-contractors. **81k:60063**
Meleško, V. I. Estimates of the solutions of ill-posed stochastic algebraic equations. (Russian) **81j:60072**
Padgett, W. J. *See* **Lee, A. C. H., 81k:60063**
Skorohod, T. A. Closure of stochastic semigroups. (Russian) **81c:60075**
Convergence of infinite products of independent random linear operators in a Hilbert space. (Russian. English summary) **81h:60090**
Ždanok, T. A. The stability of the solvability of an equation with a random closed linear operator. (Russian) **81h:60091**

secondary classifications:

Girko, V. L. An arctangent law. (Russian. English summary) **(81k:60031)**
Itoh, Shigeru Measurable or condensing multivalued mappings and random fixed point theorems. **(81d:47042)**
Masol, V. I. Invariance limit theorems for a system of random linear equations over a finite field. (Russian) **(81b:60034)**
Neumann, Klaus (*with* Richter, Gerhard) Zur Bestimmung der asymptotischen Verteilung des Lösungsvektors zufälliger linearer Gleichungssysteme. **(81b:60023)**
Richter, Gerhard *See* **Neumann, Klaus, (81b:60023)**
Turo, Jan Existence theory for a class of nonlinear random functional integral equations. **(81m:45022)**

60H99 None of the above, but in this section

d'Alessandro, Paolo Classical theory vs. white noise theory: some comments. (*See* **81f:93067**)
Bharucha-Reid, A. T. *See* **Christensen, Mark J., 81k:60064** *and* **Christensen, Mark J., 81k:60065**

Christensen, Mark J. (*with* Bharucha-Reid, A. T.) Companion matrices associated with random algebraic polynomials. **81k:60065**
(*with* Bharucha-Reid, A. T.) Stability of the roots of random algebraic polynomials. **81k:60064**
Jasinskaja, L. I. *See* **Sverdan, M. L., 81c:60073**
Miller, Kenneth S. ★An introduction to vector stochastic processes. **81k:60092**
Pachpatte, B. G. On Itô type stochastic integro-differential equation. **81c:60076**
Răşcanu, Aurel Stochastic integral and an optimal stopping problem. **81m:60122**
Sverdan, M. L. (*with* Jasinskaja, L. I.) Stability of stochastic functional-differential systems. (Russian) **81c:60073**
Vervaat, Wim On a stochastic difference equation and a representation of nonnegative infinitely divisible random variables. **81k:60064**

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Mihackiĭ, N. A. A theorem on the existence and uniqueness of the solutions of a stochastic system with lag. (Russian) **(81i:35165)**
Vauthier, Jacques Homotopie stochastique dans le complexe de de Rham. Obstruction à des formules de la moyenne pour des formes harmoniques. (English summary) **(81j:58086)**
Yasue, Kunio *See* **Zambrini, J.-C., (81e:82012)**
Zambrini, J.-C. (*with* Yasue, Kunio) Thermal mechanics: a quantum mechanical analogue of nonequilibrium statistical thermodynamics. **(81e:82012)**

60Jxx Markov processes

60J05 Markov processes with discrete parameter

Diaconis, Persi (*with* Freedman, David A.) de Finetti's theorem for Markov chains. **81f:60090**
Foguel, Shaul R. (*with* Ghoussoub, Nassif A.) Ornstein-Métivier-Brunel theorem revisited. (French summary) **81d:60065**
Dissipative Markov operators and the Dirichlet problem. **81k:60066**
Freedman, David A. *See* **Diaconis, Persi, 81f:60090**
Ghoussoub, Nassif A. *See* **Foguel, Shaul R., 81d:60065**
Greenland, Arnold Density averaging for Markov processes and the invariant measures problem. **81d:60066**
Horowitz, Shlomo Pointwise convergence of the iterates of a Harris-recurrent Markov operator. **81f:60091**
(Lin, Michael) *See* **Horowitz, Shlomo, 81f:60091**
Millet, Annie (*with* Sucheston, Louis) On the existence of σ-finite invariant measures for operators. **81j:60073**
Popov, N. N. Geometric ergodicity of Markov chains with an arbitrary phase state. (Russian) **81a:60071**
Revuz, Daniel Sur la définition des classes cycliques des chaînes de Harris. (English summary) **81f:60092**
Sucheston, Louis *See* **Millet, Annie, 81j:60073**
Šur, M. G. An analogue of the ratio limit theorem in the case of parts of a recurrent chain. (Russian) **81k:60067**

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Cogburn, Robert Markov chains in random environments: the case of Markovian environments. **(81k:60068)**
David, H. T. *See* **Kim, Geung Ho, (81c:60030)**
Durrett, Richard Conditioned limit theorems for some null recurrent Markov processes. **(81a:60046)**
Ellis, Martin H. Conditions for attaining $\bar{d}$ by a Markovian joining. **(81g:28019)**
Gillert, Heinz (*with* Vogel, Jürgen) Asymptotische Entwicklungen in einem zentralen Grenzwertsatz für homogene Markovsche Prozesse. **(81c:60024)**
Grigorescu, Şerban Contributions to the theory of generalized random systems with complete connections. I. (Romanian. English summary) **(81i:60102a)**
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Kaplan, E. I. Limit theorems for exit times of random sequences with mixing. (Russian. English summary) **(81f:60033)**
Kim, Geung Ho (*with* David, H. T.) Large deviations of functions of Markovian transitions and mathematical programming duality. **(81c:60030)**
Lal, C. D. A note on central limit theorem for the Wold's Markov process of gamma intervals. **(81k:60035)**
Maigret, Nelly Théorème de limite centrale fonctionnel pour une chaîne de Markov récurrente au sens de Harris et positive. (English summary) **(81i:60023)**
Rabe, M. Finite coding factors of Markov generators. **(81f:28017)**
Ramamurthy, K. *See* **Athreya, K. B., (81d:60092)**
Varadhan, S. R. Srinivasa Some problems of large deviations. **(81c:60031)**
Vogel, Jürgen *See* **Gillert, Heinz, (81c:60024)**

60J10 Markov chains with discrete parameter

Belaeva, Z. I. Letter to the editors: "Ergodic properties of conditional Markov chains" [Teor. Verojatnost. i Primenen. **19** (1974), 547–557; MR **50** #8708] and "Conditional Markov chains with countable state space" [ibid. **22** (1977), no. 3, 556–565; MR **56** #9744]. (Russian) **81m:60123**
Bhattacharya, Samir K. (*with* Gupta, A. K.) Occupation times for two-state Markov chains. **81j:60074**
Bolthausen, E. The minimal harmonic functions of sojourn processes of certain finite state Markov chains. **81b:60065**
Bosch, Karl Funktionen homogener Markoffscher Ketten als homogene bzw. inhomogene Markoffsche Ketten. (English summary) **81c:60077**
Bye, Barry V. *See* **Hennessey, John C., 81m:60125**
Chen, Jia Ding *See* **Hsü, Pao Lu; et al., 81c:60080**
Cocan, Moise A method of classifying the states of a Markov chain. (Romanian. German summary) **81m:60124**
Cogburn, Robert Markov chains in random environments: the case of Markovian environments. **81k:60068**
Cohn, Harry Harmonic functions for a class of Markov chains. **81c:60078**
Dion, Jean-Pierre Stationarité et continuité absolues dans les chaînes de Markov. **81k:60069**
Doukhan, Paul (*with* Ghindès, Marcel) Étude du processus: "$X_{n+1}=f(X_n)\cdot\varepsilon_n$". (English summary) **81f:60093**
Dzjubka, V. A. (*with* Korniĭčuk, M. T.) On a problem of I. Ežov. (Russian. English summary) **81e:60074**
Filonov, Ju. P. Limit theorems for a functional of a transient Markov chain. (Russian) **81b:60066**
Fröhlich, Barbara (*with* Küchler, Uwe) Über die asymptotischen und die invarianten Ereignisse Markovscher Prozesse und ihrer Raum-Zeit-Prozesse. **81e:60075**
Furman, Ja. A. A Markov chain whose transition matrix is reduced to the normal Frobenius form. (Russian) **81i:60059**
Ghindès, Marcel *See* **Doukhan, Paul, 81f:60093**
Gupta, A. K. *See* **Bhattacharya, Samir K., 81j:60074**
Hennessey, John C. (*with* Bye, Barry V.) Necessary and sufficient conditions for a matrix to be causative in a nonstationary Markov chain. **81m:60125**
Henze, Ernst (*with* Wehking, Annette) Räumlich homogene Markovketten höherer Ordnung. **81j:60075**
Herrmann, Hartmut Besetzungsmodelle. (English summary) **81c:60079**
Hsü, Pao Lu (*with* Chen, Jia Ding; Zheng, Zhang Guo) The coincidence property of stochastic matrices. (Chinese. English summary) **81c:60080**
Iosifescu, Marius The tail structure of nonhomogeneous finite state Markov chains: survey. **81e:60076**
Jóźwiak, Janina An aggregation error in a homogeneous Markov chain. (Polish. Russian and English summaries) **81k:60070**
Kalašnikov, V. V. Solution of the problem of approximating a denumerable Markov chain. **81a:60072**
Kang, Ji Ding (*with* Liu, Zhi Shan) The ergodic property of a finite homogeneous Markov chain. (Chinese) **81m:60126**
Kaplan, Michael A sufficient condition for nonergodicity of a Markov chain. **81a:60073**
Korniĭčuk, M. T. *See* **Dzjubka, V. A., 81e:60074**
Küchler, Uwe *See* **Fröhlich, Barbara, 81e:60075**
Kůrka, Petr Time hierarchy in finite filtered Markov chains. **81h:60093**
Liu, Zhi Shan *See* **Kang, Ji Ding, 81m:60126**
Mandl, Petr On aggregating controlled Markov chains. **81j:60076**
Marušin, M. N. An equality for the moments of values obtained as a result of symmetrization of an inhomogeneous Markov chain with two states. (Russian. English summary) **81g:60068**
Meyer, Carl D., Jr. An alternative expression for the mean first passage matrix. **81i:60060**
The condition of a finite Markov chain and perturbation bounds for the limiting probabilities. **81m:60127**
Piprek-Plocki, Adam Convergence d'un vecteur invariante d'une matrice stochastique $Q(\varepsilon)=(1-\varepsilon)Q_1+\varepsilon Q_2$, où $Q_1^T=Q_1$. **81k:60071**
Markoff's chain describing a certain experimental pattern. **81k:60072**
Platen, Eckhard Approximation of positive recurrent Markov chains. **81b:60067**
Qian, Min Ping The reversibility of Markov chains. (Chinese. English summary) **81h:60094**
Rodrigues, Flávio W. On an inverse problem for reducible Markov chains. **81m:60128**
Rosberg, Zvi A positive recurrence criterion associated with multidimensional queueing processes. **81j:60077**
Šnirman, M. G. Quasi-invariant distributions on uniform arrays. **81e:60077**
Wehking, Annette *See* **Henze, Ernst, 81j:60075**
Wolf, D. Approximation of the invariant probability measure of an infinite stochastic matrix. **81j:60078**
Zheng, Zhang Guo *See* **Hsü, Pao Lu; et al., 81c:60080**
Zubkov, A. M. Inequalities for restricted transition probabilities and their applications. (Russian) **81a:60074**

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Aldous, David (*with* Pitman, Jim) On the zero-one law for exchangeable events. **(81b:60032)**
Basu, Sujit K. *See* **Bhattacharjee, Manish C., (81k:90102)**
Bhattacharjee, Manish C. (*with* Basu, Sujit K.) On the Kesten-Spitzer algorithm for minimal hitting time in controlled Markov chains. **(81k:90102)**
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Formanov, Š. K. *See* **Sirażdinov, S. H., (81m:60041)**
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Mukherjea, Arunava Limit theorems: stochastic matrices, ergodic Markov chains, and measures on semigroups. **(81i:60013)**
Murari, K. A queueing system with rth order Markovian departures. **(81d:60103)**
Neuts, Marcel F. Queues solvable without Rouché's theorem. **(81h:60122)**
Pegram, G. G. S. An autoregressive model for multilag Markov chains. **(81d:60105)**

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Pitman, Jim *See* **Aldous, David, (81b:60032)**
Pruscha, Helmut (*with* Theodorescu, Radu) Recurrence and transience for discrete parameter stochastic processes. **(81a:60068)**
Siraidinov, S. H. (*with* Formanov, Š. K.) ★Предельные теоремы для сумм случайных векторов, связанных в цепь Маркова. (Russian) [Limit theorems for sums of random vectors connected in a Markov chain] **(81m:60041)**
Tavaré, S. Time reversal and age distributions. I. Discrete-time Markov chains. **(81b:92005)**
Theodorescu, Radu *See* **Pruscha, Helmut, (81a:60068)**

60J15 Random walk

Afanas'ev, V. I. Conditional random walk with negative drift. (Russian. English summary) **81a:60075**
Blum, Julius R. (*with* Reich, J. I.) p-sets for random walks. **81j:60079**
Borovkov, A. A. Continuity theorems and estimates of the rate of convergence of the components of factorization for walks defined on Markov chains. (Russian. English summary) **81f:60094**
Bougerol, Philippe (*with* Kipnis, Claude) Position d'une marche aléatoire sur $\mathbf{Z}^2$ à l'instant d'atteinte d'une droite. **81g:60069**
Chow, Y. S. (*with* Lai, Tze Leung) On the maximal excess in boundary crossings of random walks related to fluctuation theory and laws of large numbers. **81a:60076**
Cohen, Daniel I. A. (*with* Katz, Talbot M.) Recurrence of a random walk on the half-line as the generating function for the Catalan numbers. **81b:60068**
Doney, R. A. Spitzer's condition for asymptotically symmetric random walk. **81i:60061**
Donsker, M. D. (*with* Varadhan, S. R. Srinivasa) On the number of distinct sites visited by a random walk. **81j:60080**
Durrett, Richard Conditioned limit theorems for random walks with negative drift. **81h:60095**
Etemadi, Nasrollah (*with* Hamedani, G. G.) The range of two-parameter random walk in space. **81i:60062**

Further limit theorems for the range of a two-parameter random walk in space. **81i:60063**

Ežov, I. I. (*with* Zjukov, M. E.) Distribution of certain functionals for a random walk with jumps bounded from below and absorbing boundary. (Russian. English summary) **81m:60129**
Grigorčuk, R. I. Invariant measures on homogeneous spaces. (Russian) **81k:60073**
Gupta, A. (*with* Sen, Kanwar) A two-dimensional random walk in the presence of a multiple-function barrier. **81m:60130**
Hamedani, G. G. *See* **Etemadi, Nasrollah, 81i:60062**
Högnäs, Göran (*with* Mukherjea, Arunava) Recurrent random walks and invariant measures on semigroups of $n \times n$ matrices. **81m:60131**
Ishida, Kenro Some results for two-dimensional transient random walks. **81i:60064**
Kaĭmanovič, V. A. *See* **Veršik, A. M., 81f:60098**
Katz, Talbot M. *See* **Cohen, Daniel I. A., 81b:60068**
Kinzl, Franz Ein Null-Zwei-Gesetz auf lokalkompakten abelschen Halbgruppen. (English summary) **81d:60067**
Kipnis, Claude *See* **Bougerol, Philippe, 81g:60069**
Lai, Tze Leung *See* **Chow, Y. S., 81a:60076**
Lawler, Gregory F. A self-avoiding random walk. **81j:60081**
Ledrappier, François (*with* Royer, Gilles) Croissance exponentielle de certains produits aléatoires de matrices. (English summary) **81f:60095**
Letac, Gérard (*with* Takács, Lajos) Random walks on a 600-cell. **81d:60068**
Losert, Viktor (*with* Rindler, Harald) A note on random walks on compact groups. **81d:60069**
Lotov, V. I. Asymptotic analysis of distributions in problems with two boundaries. I. (Russian. English summary) **81g:60070a**

Asymptotic analysis of distributions in problems with two boundaries. II. (Russian. English summary) **81g:60070b**

Mukherjea, Arunava *See* **Högnäs, Göran, 81m:60131**
Nagaev, A. V. Integral theorems for sums of ladder epochs. (Russian) **81b:60069**
Narimanyan, S. M. Uniform distribution of random walks on topological groups. (Russian. Armenian summary) **81g:60071**
Pakes, Anthony G. Some remarks on a one-dimensional skip-free process with repulsion. **81m:60132**
Pearce, Lynn Hauser Random walks on trees. **81f:60096**
Pirdžanov, B. Limit theorem for the size of a jump. (Russian) **81m:60133**
Prajneshu (*with* Sen, Kanwar) Joint distribution of crossings and their runs. **81m:60134**
Prevot, Daniel (*with* Schott, René) Marches aléatoires sur les espaces homogènes des groupes de Lie nilpotents simplement connexes. **81f:60097**
Reich, J. I. *See* **Blum, Julius R., 81j:60079**
Rindler, Harald *See* **Losert, Viktor, 81d:60069**
Royer, Gilles *See* **Ledrappier, François, 81f:60095**
Rubin, Robert J. *See* **Weiss, George H., 81m:60135**
Saran, Jagdish (*with* Sen, Kanwar) On the fluctuations of partial sums. (German and Russian summaries) **81h:60096**
Schott, René *See* **Prevot, Daniel, 81f:60097**
Sen, Kanwar *See* **Saran, Jagdish, 81h:60096**; **Gupta, A., 81m:60130** *and* **Prajneshu, 81m:60134**
Shimura, Michio A limit theorem for conditional random walk. **81d:60070**
Stern, Frederick Absorption sequences. **81c:60081**
Takács, Lajos *See* **Letac, Gérard, 81d:60068**
Varadhan, S. R. Srinivasa *See* **Donsker, M. D., 81j:60080**
Vassiliou, P.-C. G. On certain aspects of a simple random walk with one random and one nonrandom absorbing barrier. **81k:60074**
Veršik, A. M. (*with* Kaĭmanovič, V. A.) Random walks on groups: boundary, entropy, uniform distribution. (Russian) **81f:60098**
Weiss, George H. (*with* Rubin, Robert J.) Internal configurations of span-constrained random walks. **81m:60135**
Zjukov, M. E. Distribution of certain functionals for a random walk whose jumps are bounded below. (Russian) **81j:60082**

See also **Ežov, I. I., 81m:60129**

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Alhimov, V. I. On the problem of random walk without self-intersections. (German summary) **(81e:82001)**
Arnaud, Jean-Pierre Fonctions sphériques et fonctions définies positives sur l'arbre homogène. (English summary) **(81e:43008)**
Cohen, Joel E. Convexity properties of products of random nonnegative matrices. **(81m:82002)**
Gallardo, Léonard (*with* Ries, V.) La loi des grands nombres pour les marches aléatoires sur le dual de SU(2). (English summary) **(81f:60046)**
Maksimov, V. M. Local theorems for Euclidean motions. I. **(81h:60016)**
Mohanty, Sri Gopal ★Lattice path counting and applications. **(81f:60020)**
Mukherjea, Arunava Limit theorems: stochastic matrices, ergodic Markov chains, and measures on semigroups. **(81i:60013)**
Narayana, T. V. ★Lattice path combinatorics with statistical applications. **(81f:60019)**
Pinelis, I. F. The rate of convergence in boundary problems for a class of domains. (Russian) **(81e:60022)**
Ries, V. *See* **Gallardo, Léonard, (81f:60046)**
Suzuki, Giitiro On a stochastic game with one-chance recovery. **(81h:60067)**
Vervaat, Wim On a stochastic difference equation and a representation of nonnegative infinitely divisible random variables. **(81b:60064)**

60J20 Applications of discrete Markov processes (social mobility, learning theory, industrial processes, etc.)

von Bahr, Bengt (*with* Martin-Löf, Anders) Threshold limit theorems for some epidemic processes. **81h:60097**
Cohen, Joel E. Random evolutions in discrete and continuous time. **81c:60082**
Martin-Löf, Anders *See* **von Bahr, Bengt, 81h:60097**
Vassiliou, P.-C. G. A note on stability in Gani-type models in manpower systems. **81h:60098**

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Boggio R., Rafael *See* **Sorarrain, Oscar M.; et al., (81j:92041)**
Cohen, Joel E. Ergodic theorems in demography. **(81j:92029)**
Findeisen, Peter Asymptotic properties of a certain class of Bush-Mosteller learning models. **(81m:60093)**
Gheorghe, Adrian V. Markovian models with logical conditions for fault isolation with insufficient observations. **(81d:93059)**
Guilbaud, G. Th. Note sur les comptabilités markoviennes. (English summary) **(81c:68071)**
Kárka, Petr Time hierarchy in finite filtered Markov chains. **(81h:60093)**
Ocampo, Julio C. *See* **Sorarrain, Oscar M.; et al., (81j:92041)**
Răduică, Mihaela Un modèle stochastique d'apprentissage basé sur la méthode Skinner du conditionnement opérant. **(81e:92018)**
Sorarrain, Oscar M. (*with* Boggio R., Rafael; Ocampo, Julio C.) Continuous and discontinuous Markov-chain models for mastitis infection. **(81j:92041)**
Vassiliou, P. P. *See* **Vassiliou, P.-C. G., (81d:93057)**
Vassiliou, P.-C. G. (*with* Vassiliou, F. P.) On the limiting structure of an expanding Markovian system with given size. **(81d:93057)**

60J25 Markov processes with continuous parameter

Bass, Richard F. Adding and subtracting jumps from Markov processes. **81b:60070**
Boyarsky, Abraham A decomposition property for prolongational limit sets of Markov processes. **81f:60099**
Černa, M. F. An ergodicity condition for a class of Markov chains with boundary that are homogeneous with respect to the second component. (Russian) **81e:60078**
Chacon, R. V. (*with* Jamison, B.) A fundamental property of Markov processes with an application to equivalence under time changes. **81i:60065**
Döhler, Raimund Einige Eigenschaften diskreter randomisierter Zeiten. (Russian summary) **81k:60075**

Randomisierte Zeiten und Prozesse mit unabhängigen Zuwächsen. **81e:60079**

Ežov, I. I. (*with* Rešetnjak, V. M.) On integral functionals of homogeneous branching processes. (Russian. English summary) **81j:60083**
Gravereaux, J. B. (*with* Jacod, Jean) Sur la construction des classes de processus de Markov invariantes par changement de temps. **81d:60071**
Graversen, Svend Erik ★Duality theory for Markov processes. **81e:60080**
Heyer, Herbert ★Einführung in die Theorie Markoffscher Prozesse. (German) [Introduction to the theory of Markov processes] **81e:60081**
Hu, Di He Theory of the construction of q-processes in abstract spaces. II. (Chinese) **81a:60077**

The existence and uniqueness of temporally inhomogeneous denumerable Q processes. (Chinese) **81a:60078**

Jacod, Jean *See* **Gravereaux, J. B., 81d:60071**
Jamison, B. *See* **Chacon, R. V., 81i:60065**
Nualart Rodón, David (*with* Sanz, Marta) A Markov property for two-parameter Gaussian processes. **81i:60066**
Rešetnjak, V. M. *See* **Ežov, I. I., 81j:60083**
Rěznikov, S. I. Asymptotic phase enlargement of weakly inhomogeneous Markov processes. (Russian. English summary) **81a:60079**
Sant'Anna, A. P. Some transformations of Markov processes. (Portuguese) **81i:60067**
Sanz, Marta *See* **Nualart Rodón, David, 81i:60066**
Tudor, Constantin Some examples of Markov processes with two-dimensional time parameter. **81e:60082**

An invariance principle for Markov processes with two-dimensional time parameter. **81e:60083**

Tuominen, Pekka (*with* Tweedie, Richard L.) The recurrence structure of general Markov processes. **81a:60080**

Tweedie, Richard L. *See* **Tuominen, Pekka, 81a:60080**

Wang, Albert T. Time-dependent functions of Brownian motion that are Markovian. **81c:60083**

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Albeverio, Sergio (*with* Høegh-Krohn, Raphael; Streit, L.) Regularization of Hamiltonians and processes. **81g:81018**

Athreya, K. B. (*with* Ramamurthy, K.) Renewal theory—a Markov process approach. **81d:60092**

Bismut, Jean-Michel Temps d'arrêt optimal, quasi-temps d'arrêt et retournement du temps. (English summary) **81d:60052**

Buiculescu, Mioara On local times for nonhomogeneous Markov processes. **81k:60083**

Chen, Chang Shing *See* **Wang, Albert T., 81k:60087**

Chung, Kai Lai On stopped Feynman-Kac functionals. **81m:60144**

Çinlar, Erhan On increasing continuous processes. **81b:60090**

Engelbert, Alfred (*with* Engelbert, Hans-Jürgen) Über Eigenschaften der Wertfunktion s beim Problem des optimalen Stoppens von Markov-Prozessen. (Russian and English summaries) **81m:60076**

Engelbert, Hans-Jürgen *See* **Engelbert, Alfred, 81m:60076**

Evstigneev, I. V. (*with* Ovseevič, A. I.) Splitting times for random fields. (Russian. English summary) **81h:60069**

Fleming, Wendell H. (*with* Viot, Michel) Some measure-valued Markov processes in population genetics theory. **81a:60059**

Measure-valued processes in the control of partially-observable stochastic systems. **81e:93075**

Høegh-Krohn, Raphael *See* **Albeverio, Sergio; et al., 81g:81018**

van Kampen, N. G. Composite stochastic processes. **81a:82005**

Ovseevič, A. I. *See* **Evstigneev, I. V., 81h:60069**

Ramamurthy, K. *See* **Athreya, K. B., 81d:60092**

Streit, L. *See* **Albeverio, Sergio; et al., 81g:81018**

Viot, Michel *See* **Fleming, Wendell H., 81a:60059**

Wang, Albert T. (*with* Chen, Chang Shing) Functions of an n-dimensional Brownian motion that are Markovian. **81k:60087**

60J27 Markov chains with continuous parameter

Bramson, Maury (*with* Griffeath, David) A note on the extinction rates of some birth-death processes. **81m:60136**

Ciciašvili, G. Š. The construction of Lyapunov functions for investigating the stability of piecewise-linear Markov chains. **81m:60137**

Feigin, Paul D. (*with* Rubinstein, Eliezer) Equivalent descriptions of perturbed Markov processes. **81d:60072**

Frydman, Halina The embedding problem for Markov chains with three states. **81a:60081**

A structure of the bang-bang representation for 3×3 embeddable matrices. **81m:60138**

Gallucci, Vincent F. *See* **Hertzberg, Richard C., 81k:60076**

Griffeath, David *See* **Bramson, Maury, 81m:60136**

Hertzberg, Richard C. (*with* Gallucci, Vincent F.) First-order stochastic chemical reactions and oscillations in the variance. **81k:60076**

Mountford, David An inequality in p-functions. **81k:60077**

Pakes, Anthony G. The age of a Markov process. **81b:60071**

Rubinstein, Eliezer *See* **Feigin, Paul D., 81d:60072**

Stepanov, S. N. Calculation of the correlation function of a Markov process with continuous time and a finite number of states. **81b:60072**

Tavaré, S. A note on finite homogeneous continuous-time Markov chains. (French summary) **81f:60100**

Yang, Xiang Qun U intervals for denumerable Markov processes. (Chinese. English summary) **81k:60078**

Yasuda, Masami The calculation of limit probabilities for Markov jump processes. **81f:60101**

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Bartoszyński, Robert Some mathematical models of biological phenomena. **81m:92037**

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60J35 Transition functions, generators and resolvents [See also 47D05, 47D07.]

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60J55 Local time and additive functionals

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J. Azéma-M. Yor ★Temps locaux. (French) [Local times] **(81b:60042)**

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60J60 Diffusion processes [See also 58G32.]

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60J65 Brownian motion [See also 58G32.]

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Gallardo, Léonard Vitesse de fuite et comportement asymptotique du mouvement brownien sur les groupes nilpotents. (English summary) **81j:60090**

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Hida, Takeyuki White noise and Lévy's functional analysis. **81c:60088**
★Brownian motion. **81a:60089**

Kendall, Wilfrid S. The knotting of Brownian motion in 3-space. **81f:60110**

Knight, Frank B. On the sojourn times of killed Brownian motion. **81a:60090**
On the excursion process of Brownian motion. **81d:60081**

Küchler, Uwe Über parabolische Funktionen eindimensionaler Quasidiffusionsprozesse. **81i:60074**
Some asymptotic properties of the transition densities of one-dimensional quasidiffusions. **81i:60075**

Kuo, Hui Hsiung Uhlenbeck-Ornstein process on a Riemann-Wiener manifold. **81h:60106**

Lakatos-Lindenberg, Katja *See* **Seshadri, Venkita, 81i:60076**

Laskin, N. V. *See* **Virčenko, Ju. P., 81d:60082**

Meyer, P. A. Correction à: "Démonstration probabiliste de certaines inégalités de Littlewood-Paley, IV" [Séminaire de Probabilités, X (Première partie, Univ. Strasbourg, Strasbourg, année universitaire 1974/1975), pp. 175–183, Lecture Notes in Math., 511, Springer, Berlin, 1976; MR 58 #18751e]. **81m:60147**

Park, C. (*with* Schuurmann, F. J.) Evaluations of absorption probabilities for the Wiener process on large intervals. **81f:60111**

Pfister, Charles E. *See* **Blanchard, Philippe, 81e:60087**

Révész, Pál A note to the Chung-Erdős-Sirao theorem. **81g:60082**

Rosenkrantz, Walter A. (*with* Sawyer, Stanley) L^p estimates for stopping times of Bessel processes. **81m:60148**

Satubaldyev, D. *See* **Aziarov, T. A., 81j:60089**

Sawyer, Stanley *See* **Rosenkrantz, Walter A., 81m:60148**

Schuurmann, F. J. *See* **Park, C., 81f:60111**

Seshadri, Venkita (*with* Lakatos-Lindenberg, Katja) Extrema statistics of Wiener-Einstein processes in one, two, and three dimensions. **81i:60076**

(Speed, T. P.) *See* **Hida, Takeyuki, 81a:60089**

Ugbebor, Olabisi O. Uniform variation results for Brownian motion. **81b:60081**

Varadhan, S. R. Srinivasa *See* **Donsker, M. D., 81b:60080**

Virčenko, Ju. P. (*with* Laskin, N. V.) Coarse-grained description of the distribution of solutions of the Langevin equation. (Russian. English summary) **81d:60082**

Wang, Albert T. (*with* Chen, Chang Shing) Functions of an n-dimensional Brownian motion that are Markovian. **81k:60087**

Wendel, J. G. An independence property of Brownian motion with drift. **81g:60083**

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Bolthausen, E. A central limit theorem for the sojourn times of strongly ergodic Markov chains. **(81b:60018)**

Chan, Arthur H. C. Erdős-Rényi type modulus of continuity theorems for Brownian sheets. **(81c:60032)**

Csörgő, M. (*with* Révész, Pál) How big are the increments of a multiparameter Wiener process? **(81a:60041)**

Davis, Burgess Hardy spaces and rearrangements. **(81h:42011)**

Dubuc, Serge ★Problèmes d'optimisation en calcul des probabilités. (French) [Optimization problems in the theory of probabilities] **(81a:60002)**

Evans, Glenn T. Momentum space diffusion equations for chain molecules. **(81c:82004)**

Higuchi, Yasunari On some limit theorems related to the phase separation line in the two-dimensional Ising model. **(81f:60139)**

Hoffmann-Ostenhof, M. (*with* Hoffmann-Ostenhof, Thomas; Simon, B.) Brownian motion and a consequence of Harnack's inequality: nodes of quantum wave functions. **(81g:81019)**

Hoffmann-Ostenhof, Thomas *See* **Hoffmann-Ostenhof, M.; et al., (81g:81019)**

Kageyama, Seiji (*with* Ogura, Yukio) On a limit theorem for branching one-dimensional diffusion processes. **(81m:60145)**

Maurey, B. Isomorphismes entre espaces H_1. **(81m:46042)**

Mirahmedov, Š. A. Limit theorems for the first passage time over a step-boundary. (Russian. Lithuanian and English summaries) **(81c:60044)**

Nelson, Edward Connection between Brownian motion and quantum mechanics. **(81h:81027)**

Ogura, Yukio *See* **Kageyama, Seiji, (81m:60145)**

Øksendal, Bernt A Wiener test for integrals of Brownian motion and the existence of smooth curves in nowhere dense sets. **(81d:31015)**

Révész, Pál *See* **Csörgő, M., (81a:60041)**

Sancho, J. M. *See* **San Miguel, M., (81j:82006)**

San Miguel, M. (*with* Sancho, J. M.) A colored-noise approach to Brownian motion in position space. Corrections to the Smoluchowski equation. **(81j:82006)**

Ševljakov, A. Ju. Stochastic differentiation and integration of functionals of a Wiener process. (Russian) **(81b:60053)**

Shigekawa, Ichiro Absolute continuity of probability laws of Wiener functionals. **(81m:60097)**

Simon, B. *See* **Hoffmann-Ostenhof, M.; et al., (81g:81019)**

Tsuchiya, Masaaki On the stochastic differential equation for a two-dimensional Brownian motion with boundary condition. **(81d:60079)**

Watanabe, Shinzo A limit theorem for sums of i.i.d. random variables with slowly varying tail probability. **(81i:60025)**

Yoeurp, Ch. Sur la dérivation des intégrales stochastiques. **(81m:60098)**

Yor, Marc Les filtrations de certaines martingales du mouvement brownien dans $\mathbf{R}^n$. **(81b:60045)**

60J70 Applications of diffusion theory (population genetics, absorption problems, etc.)

Okada, Norio On convergence to diffusion processes of Markov chains related to population genetics. **81m:60149**

Prajneshu Diffusion approximations for models of population growth with logarithmic interactions. **81j:60091**

secondary classifications:

Anderson, R. *See* **Watterson, G. A., (81h:92011)**

Bach, A. (*with* Dürr, D.) Entropy density in function space and the Onsager-Machlup function. **(81h:82025)**

van den Broeck, C. (*with* Houard, J.; Malek-Mansour, M.) Chapman-Enskog development of the multivariate master equation. **(81j:80006)**

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A dynamical theory of Markovian diffusion. **(81a:81032)**

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Dürr, D. *See* **Bach, A., (81h:82025)**

Gillespie, John H. *See* **Turelli, Michael, (81k:92043)**

Griffiths, R. C. Lines of descent in the diffusion approximation of neutral Wright-Fisher models. **(81f:92020)**

Allele frequencies in multidimensional Wright-Fisher models with a general symmetric mutation structure. **(81f:92021)**

Houard, J. *See* **van den Broeck, C.; et al., (81j:80006)**

Langouche, F. (*with* Roekaerts, D.; Tirapegui, E.) WKB-type expansion for Langevin equations. **(81d:82005)**

Malek-Mansour, M. *See* **van den Broeck, C.; et al., (81j:80006)**

Marcus, Robert Optimal diffusion in a random environment. **(81m:92044)**

Mergenthaler, Wolfgang A sufficient criterion for particles performing a diffusive motion with state-dependent death rate to die with probability one. **(81f:92025)**

Pickard, David K. (*with* Tory, Elmer M.) Experimental implications of a Markov model for sedimentation. **(81c:76045)**

Roekaerts, D. *See* **Langouche, F.; et al., (81d:82005)**

Sato, Ken-iti Convergence to a diffusion of a multi-allelic model in population genetics. **(81d:92010)**

Tirapegui, E. *See* **Langouche, F.; et al., (81d:82005)**

Tory, Elmer M. *See* **Pickard, David K., (81c:76045)**

Turelli, Michael (*with* Gillespie, John H.) Conditions for the existence of stationary densities for some two-dimensional diffusion processes with applications in population biology. **(81k:92043)**

Watterson, G. A. (*with* Anderson, R.) Detecting natural selection: the stepwise mutation model with heterosis. **(81h:92011)**

60J75 Jump processes

Ahmedova, G. I. Limit of a generalized Poisson process with an absorbing barrier. (Russian) **81c:60089**

Barbour, A. D. Equilibrium distributions for Markov population processes. **81h:60107**

Wang, Zi Kun Sojourn times and first passage times for birth and death processes. **81e:60088**

secondary classifications:

Arnold, L. (*with* Theodosopulu, M.) Deterministic limit of the stochastic model of chemical reactions with diffusion. **(81f:35061)**

Čebotarev, A. M. (*with* Maslov, V. P.) Processus de sauts et leurs applications dans la mécanique quantique. **(81g:81024)**

Hazen, È. M. (*with* Kankanjan, L. G.) Restoration of jump components of a multidimensional Markov process. (Russian. English summary) **(81j:93059)**

Julkevič, A. A. Reduction of the jump Markov control model to a discrete time model. (Russian. English summary) **(81f:90115)**

Kankanjan, L. G. *See* **Hazen, È. M., (81j:93059)**

Kohlmann, Michael (*with* Rishel, Raymond) A variational inequality for a partially observed stopping time problem. **(81e:60046)**

Maslov, V. P. *See* **Čebotarev, A. M., (81g:81024)**

Rishel, Raymond *See* **Kohlmann, Michael, (81e:60046)**

Tanaka, Hiroshi On the uniqueness of Markov process associated with the Boltzmann equation of Maxwellian molecules. **(81d:60063)**

Theodosopulu, M. *See* **Arnold, L., (81f:35061)**

Ventcel', A. D. Rough limit theorems on large deviations for Markov random processes. III. (Russian. English summary) **(81a:60040)**

60J80 Branching processes (Galton-Watson, birth-and-death, etc.)

Badalbaev, I. S. Properties of certain functionals of trajectories of supercritical multitype branching processes. (Russian) **81e:60089**

Bartoszyński, Robert Predators and prey. (Polish) **81a:60091**

Bharucha-Reid, A. T. Markov branching processes and semigroups of operators. (*See* **81e:00004**)

Boiko, R. V. Moments of a branching process in varying environment. (Russian) **81d:60083**

Branching processes with immigration in varying environment, and some queueing systems. (Russian) **81m:60150**

On a supercritical branching process with varying environment. (Russian) **81j:60092**

Cohn, Harry (*with* Schuh, Hans-Jürgen) On the continuity and the positivity of the finite part of the limit distribution of an irregular branching process with infinite mean. **81g:60084**

Daly, Fergus Collapsing supercritical branching processes. **81e:60090**

van Doorn, Erik A. Stochastic monotonicity of birth-death processes. **81d:60089**

Eisele, Th. A nonlinear martingale problem. **81f:60112**

Ežov, I. I. (*with* Šurenkov, V. M.) Branching processes in a random environment. (Russian) **81d:60084**

(*with* Reletnjak, V. M.) Integral functionals of nonhomogeneous branching processes. (Russian. English summary) **81f:60113**

Fearn, Dean H. Extinction probability for critical age-dependent branching processes with generation dependence. **81d:60085**

Fujimagari, Tetsuo On the extinction time distribution of a branching process in varying environments. **81d:60086**

Glaz, J. Probabilities and moments for absorption in finite homogeneous birth-death processes. **81j:60093**

Gorostiza, Luis G. (*with* Moncayo, Alberto Ruíz) Invariance principles for the spatial distributions of branching populations. **81m:60151**

Grey, D. R. On regular branching processes with infinite mean. **81c:60090**

A new look at convergence of branching processes. **81e:60091**

Hutton, J. The recurrence and transience of two-dimensional linear birth and death processes. **81j:60094**

Ibragimov, R. (*with* Rahimov, I.) Limit theorems for supercritical multitype Galton-Watson processes. (Russian) **81c:60091**

Ivanoff, B. G. The branching diffusion with immigration. **81d:60087**

Janev, N. M. (*with* Mitov, K. V.) Controlled branching processes: the case of random migration. **81k:60088**

Kaneko, Tetsuo On the limit behavior of some branching processes with immigration. **81f:60114**

Klein, B. (*with* Macdonald, P. D. M.) The multitype continuous-time Markov branching process in a periodic environment. **81b:60082**

Levin, L. G. Probability of extinction for a multiphase birth and death process. (Russian) **81a:60092**

Macdonald, P. D. M. *See* **Klein, B., 81b:60082**

Maister, Penka I. The second factorial moment of a branding diffusion process. (Russian) **81b:60083**

Mellein, Bernhard ★Der kritische Galton-Watson Prozess mit Immigration—lokale Grenzwertsätze und approximierende Diffusionen. (German) [The critical Galton-Watson process with immigration—local limit theorems and approximating diffusions] **81b:60084**

Mitov, K. V. *See* **Janev, N. M., 81k:60088**

Moncayo, Alberto Ruíz *See* **Gorostiza, Luis G., 81m:60151**

O'Brien, G. L. A limit theorem for sample maxima and heavy branches in Galton-Watson trees. **81i:60077**

Palm, Ursula Anwendung von Itô-Gleichungen bei Geburts- und Todesprozessen. **81d:60088**

Pastore, G. L. A branching diffusion process on a compact space. (Russian. English summary) **81j:60095**

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Rahimov, I. Some properties of supercritical branching processes with immigration. (Russian) **81f:60116**

See also **Ibragimov, R., 81c:60091**

Ramamurthy, K. Convergence of age and type distributions in multitype critical Bellman-Harris processes. **81k:60089**

Reddingius, J. *See* **de Vries, S. A.; et al., 81i:60079**

Reietnjak, V. M. *See* **Ežov, I. I.**, **81f:60113**
Rossi, Guido Antonio More on the birth and death stochastic process. (Italian. English summary) **81i:60078**
Schuh, Hans-Jürgen *See* **Cohn, Harry**, **81g:60084**
Srinivasan, S. K. (*with* Udayabaskaran, S.) On a stochastic integral associated with a birth and death process. **81m:60152**
Stam, A. J. *See* **de Vries, S. A.; et al.**, **81i:60079**
Störmer, Horand Verteilung der Erstüberschreitungszeiten beim Yule-Prozess. **81a:60094**
Sugitani, Sadao On the limit distributions of decomposable Galton-Watson processes. **81h:60108**
Šurenkov, V. M. Additive functionals of branching processes. (Russian. English summary) **81f:60117**
See also **Ežov, I. I.**, **81d:60084**
Udayabaskaran, S. *See* **Srinivasan, S. K.**, **81m:60152**
Vatutin, V. A. A new limit theorem for a critical Bellman-Harris branching process. (Russian) **81b:60085**
de Vries, S. A. (*with* Stam, A. J.; Reddingius, J.) Note on a death process. **81i:60079**
Wang, Frank J. S. The convergence of a branching Brownian motion used as a model describing the spread of an epidemic. **81h:60109**
Žurnev, Ju. T. Properties of an estimate for the mean number of direct descendants of a particle in a branching process with immigration. (Russian) **81e:60092**

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Asmussen, Søren On some two-sex population models. **(81h:92013)**
Badalbaev, I. S. (*with* Ibragimov, R.) Statistics of branching processes with two types of particles. (Russian) **(81f:62132)**
Cohn, Harry Harmonic functions for a class of Markov chains. **(81c:60078)**
Gorostiza, Luis G. (*with* Griego, Richard J.) Convergence of branching transport processes to branching Brownian motion. **(81a:60095)**
Griego, Richard J. *See* **Gorostiza, Luis G.**, **(81a:60095)**
Hoppe, Fred M. On a Schröder equation arising in branching processes. **(81g:39007)**
Huang, Chün Tsung *See* **Huang, T'i Yüan**, **(81e:62096)**
Huang, T'i Yüan (*with* Huang, Chün Tsung) Maximum likelihood estimate of the age of a Galton-Watson process with Poisson offspring distribution. **(81e:62096)**
Ibragimov, R. *See* **Badalbaev, I. S.**, **(81f:62132)**
Johnson, Richard A. (*with* Susarla, V.; Van Ryzin, John) Bayesian nonparametric estimation for age-dependent branching processes. **(81g:62146)**
Pakes, Anthony G. The age of a Markov process. **(81b:60071)**
Potter, Randall W. *See* **Srivastava, R. C.**, **(81g:62148)**
Srivastava, R. C. (*with* Potter, Randall W.) Statistical inference for the Galton-Watson branching process. **(81g:62148)**
Sugitani, Sadao On the smoothness of infinitely divisible distributions corresponding to some ordinary differential equations. **(81e:60013)**
Susarla, V. *See* **Johnson, Richard A.; et al.**, **(81g:62146)**
Van Ryzin, John *See* **Johnson, Richard A.; et al.**, **(81g:62146)**
Vatutin, V. A. The distance to the nearest common ancestor in Bellman-Harris branching processes. (Russian) **(81f:60079)**

60J85 Applications of branching processes [See also 60K30, 92A10, 92A15.]

Bühler, W. J. Quasicompetition—a new aspect. **81d:60090**
Heyde, C. C. On assessing the potential severity of an outbreak of a rare infectious disease: a Bayesian approach. **81m:60153**
Khan, I. A. (*with* Rehman, Sirajur) On estimation of the matrix of the first moments of a two-dimensional branching process. **81m:60154**
Rehman, Sirajur *See* **Khan, I. A.**, **81m:60154**

secondary classifications:

Wang, Frank J. S. The convergence of a branching Brownian motion used as a model describing the spread of an epidemic. **(81h:60109)**

60J99 None of the above, but in this section

Cohen, Joel E. Long-run growth rates of discrete multiplicative processes in Markovian environments. **81b:60086**
Deland, Paul N. (*with* Shiflett, Ray C.) Covariance linear functionals on doubly stochastic measures. **81g:60085**
Eberl, Walther Recursively defined Markov processes (discrete parameter). **81d:60091**
Gorostiza, Luis G. (*with* Griego, Richard J.) Convergence of branching transport processes to branching Brownian motion. **81a:60095**
Griego, Richard J. *See* **Gorostiza, Luis G.**, **81a:60095**
Shiflett, Ray C. *See* **Deland, Paul N.**, **81g:60085**

secondary classifications:

Billard, L. (*with* Lacayo, H.; Langberg, N. A.) The discrete asymptotic behaviour of a simple batch epidemic process. **(81g:92017)**
Chiang, Chin Long Survival and stages of disease. **(81a:92008)**
Dekker, H. (*with* van Kampen, N. G.) The expansion of the Fokker-Planck equation including a critical point. **(81m:82020)**
Denny, J. L. The support of discrete extremal measures with given marginals. **(81a:28004)**
Ganihodžaev, R. N. *See* **Surymsakov, T. A.**, **(81m:47092)**
Hänggi, P. Stochastic processes. I. Asymptotic behaviour and symmetries. **(81c:82013)** Stochastic processes. II. Response theory and fluctuation theorems. **(81c:82014)**
Hargrove, John *See* **Lang, Kenneth**, **(81j:92036)**
van Kampen, N. G. An equation for the characteristic function of a Markov process and its application to a Langevin process. **(81k:82021)**
See also **Dekker, H.**, **(81m:82020)**
Karev, G. P. (*with* Treskov, S. A.) The method of Ljapunov functions in stochastic models of the mathematical theory of populations. (Russian) **(81e:92013)**
Karmeshu (*with* Pathria, R. K.) Stochastic evolution of a nonlinear model of diffusion of information. **(81f:92034)**
Karr, Alan F. Classical limit theorems for measure-valued Markov processes. **(81a:60044)**
Lacayo, H. *See* **Billard, L.; et al.**, **(81g:92017)**
Lang, Kenneth (*with* Hargrove, John) Mean and variance of population size assuming Markovian vital rates. **(81j:92036)**
Langberg, N. A. *See* **Billard, L.; et al.**, **(81g:92017)**
Luk'janov, V. F. *See* **Šmatok, S. A.**, **(81a:93112)**
Nghiêm Đăng Ngọc (*with* Yor, Marc) Champs markoviens et mesures de Gibbs sur R. (English summary) **(81g:60100)**
Pathria, R. K. *See* **Karmeshu**, **(81f:92034)**
Surymsakov, T. A. (*with* Ganihodžaev, R. N.) The ergodic principle for quadratic stochastic operators. (Russian) **(81m:47092)**
Šmatok, S. A. (*with* Luk'janov, V. F.) ★Вопросы теорий взаимодействующих Марковских систем. (Russian) [Questions on the theory of interacting Markov systems] **(81a:93112)**
Treskov, S. A. *See* **Karev, G. P.**, **(81e:92013)**
Yor, Marc *See* **Nghiêm Đăng Ngọc**, **(81g:60100)**

60Kxx Special processes

60K05 Renewal theory

Alimov, D. Reaching a fixed level by a class of non-Markovian trajectories. (Russian) **81g:60086**
Ansell, J. (*with* Bendell, A.; Humble, S.) Nested renewal processes. **81m:60155**
Athreya, K. B. (*with* Ramamurthy, K.) Renewal theory—a Markov process approach. **81d:60092**
Bendell, A. *See* **Ansell, J.; et al.**, **81m:60155**
Berbee, Henry C. P. ★Random walks with stationary increments and renewal theory. **81e:60093**
Biswas, Suddhendu (*with* Nauhria, Indu) A note on the development of some interrupted waiting time distributions. **81f:60118**
Brown, Mark Bounds, inequalities, and monotonicity properties for some specialized renewal processes. **81d:60093**
Daley, D. J. Tight bounds for the renewal function of a random walk. **81e:60094**
Englund, Gunnar Remainder term estimate for the asymptotic normality of the number of renewals. **81m:60156**
Forst, Gunnar Multiples of renewal functions: remark on a result of D. J. Daley. **81d:60094**
Genis, Ja. G. The asymptotic behavior of a flow of rare events in a regenerating process. **81b:60087**
Humble, S. *See* **Ansell, J.; et al.**, **81m:60155**
Ito, Yoshifusa Renewal processes decomposable into i.i.d. components. **81j:60096**
McDonald, David Ergodic behaviour of nonstationary regenerative processes. **81d:60095**
Miller, Douglas R. Almost sure comparisons of renewal processes and Poisson processes, with application to reliability theory. **81b:60088**
Mori, Toshio A random renewal theorem. **81m:60157**
Nauhria, Indu *See* **Biswas, Suddhendu**, **81f:60118**
Neffke, H. Renewal reward processes with linear expectation functions. **81e:60095**
Niculescu, Ştefan P. An asymptotic renewal theorem for m-general renewal processes. **81d:60096**
Ramamurthy, K. *See* **Athreya, K. B.**, **81d:60092**
Solomon, Frederick A renewal model with randomly selected parameters. **81f:60119**

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Khan, Rasul A. Some first passage problems related to cusum procedures. **(81c:62091)**
Oakes, David Matched pairs in independent Poisson processes. **(81i:60054)**
Obretenov, Apostol A class of discrete distributions and their application to a simple random walk. (Russian) **(81c:60020)**
Serfozo, Richard F. High-level exceedances of regenerative and semistationary processes. **(81h:60050)**
Stadje, Wolfgang Erneuerungssätze für Prozesse mit stationären unabhängigen Zuwächsen. **(81b:60074)**
Takács, Lajos Queues with infinitely many servers. (French summary) **(81m:60172)**
Zähle, U. A class of random dependent shifts leaving recurrent point processes invariant. (Russian. Lithuanian and English summaries) **(81f:60074)**

60K10 Applications (reliability, demand theory, etc.)

Bhattacharya, D. D. A Bayesian approach to a renewal function. **81d:60097**
Block, Henry W. (*with* Savits, Thomas H.) Multivariate increasing failure rate average distributions. **81f:60120**
Bosch, Karl Erneuerungsprozesse mit Garantieleistungen. **81j:60097**
Chiang, Dalen T. (*with* Niu, Shun Chen) On the distribution of time to first system failure. **81g:60087**
Dharmadhikari, A. D. *See* **Gopalan, M. N.**, **81m:60158**
Franken, Peter (*with* Streller, Arnfried) Reliability analysis of complex repairable systems by means of marked point processes. **81a:60096**
Gopalan, M. N. (*with* Dharmadhikari, A. D.) 2-unit system with delayed repair facility. **81m:60158**
Grandell, Jan (*with* Rodhe, Henning) A mathematical model for the residence time of aerosol particles removed by precipitation scavenging. **81i:60080**
Griffith, William S. Multistate reliability models. **81k:60090**

Korniĭčuk, M. T. A discrete model for estimation of the reliability of a system. (Russian. German summary) **81a:60097**

Kozlov, V. V. (*with* Solov′ev, A. D.) Optimal servicing of renewable systems. I. **81j:60098a**

(*with* Solov′ev, A. D.) Optimal servicing of renewable systems. II. **81j:60098b**

Lee, P. A. Random wall and stochastic spider—a problem in reliability theory. **81c:60092**

Niu, Shun Chen *See* **Chiang, Dalen T., 81g:60087**

Osaki, Shunji *See* **Takeda, Masaharu, 81b:60089**

Rodhe, Henning *See* **Grandell, Jan, 81i:60080**

Ross, Sheldon M. (*with* Schechtman, Jack) On the first time a separately maintained parallel system has been down for a fixed time. **81e:60096**

Samir Abdelsalam, M. A reliability model of partially parallel systems. **81h:60110**

Savits, Thomas H. *See* **Block, Henry W., 81f:60120**

Schechtman, Jack *See* **Ross, Sheldon M., 81e:60096**

Solov′ev, A. D. *See* **Kozlov, V. V., 81j:60098a** *and* **Kozlov, V. V., 81j:60098b**

Srinivasan, S. K. (*with* Subramanian, Ramachandran) ★Probabilistic analysis of redundant systems. **81d:60098**

Streller, Arnfried *See* **Franken, Peter, 81a:60096**

Subramanian, Ramachandran *See* **Srinivasan, S. K., 81d:60098**

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60K30 Applications (congestion, allocation, storage, traffic, etc.) [See also 60J80.]

De Morais, Paulo Renato A Markovian model for a storage system in continuous time. (Portuguese) **81b:60105**

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(*with* Tin, Pyke) On the first emptiness time of an infinite dam. **81m:60176**
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60K35 Interacting random processes; statistical mechanics type models; percolation theory

Bramson, Maury (*with* Griffeath, David) Clustering and dispersion rates for some interacting particle systems on $\mathbf{Z}$. **81b:60106**

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60K99 None of the above, but in this section

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62–XX STATISTICS {For numerical methods, see 65U05.}

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Kendall, Maurice ★Multivariate analysis. **81m:62001**
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Khatri, C. G. *See* **Srivastava, Muni Shanker, 81j:62001**
Mardia, Kantilal Varichand (*with* Kent, John T.; Bibby, John M.) ★Multivariate analysis. **81h:62003**
Phatak, A. G. Difference between BCR of size α and BCR of significance level α from a teaching standpoint. **81g:62001**
Schach, Siegfried (*with* Schäfer, Thomas) ★Regressions- und Varianzanalyse. (German) [Regression and variance analysis] **81g:62002**
Schäfer, Thomas *See* **Schach, Siegfried, 81g:62002**
Srivastava, Muni Shanker (*with* Khatri, C. G.) ★An introduction to multivariate statistics. **81j:62001**
Walpole, Ronald E. *See* **Freund, John E., 81k:62002**

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Blake, Ian F. ★An introduction to applied probability. **(81k:60001)**
Fienberg, Stephen E. Using loglinear models to analyze cross-classified categorical data. **(81g:62101)**
Frodesen, A. G. (*with* Skjeggestad, O.; Tøfte, H.) ★Probability and statistics in particle physics. **(81e:81001)**
(Gelbaum, Bernard R.) *See* **Sveĭnikov, A. A., (81f:60002)**
Skjeggestad, O. *See* **Frodesen, A. G.; et al., (81e:81001)**
Sveĭnikov, A. A. ★Problems in probability theory, mathematical statistics and theory of random functions. **(81f:60002)**
Tøfte, H. *See* **Frodesen, A. G.; et al., (81e:81001)**

62–02 Advanced exposition (research surveys, monographs, etc.)

Berger, James O. ★Statistical decision theory: foundations, concepts, and methods. **81k:62003**
Cox, David Roxbee (*with* Hinkley, David V.) ★Problems and solutions in theoretical statistics. **81c:62001**
Craiu, Virgil *See* **Mihoc, Gheorghe, 81g:62003**
Dawid, A. P. Conditional independence in statistical theory. **81e:62001**
Has′minskiĭ, R. Z. *See* **Ibragimov, I. A., 81h:62004**
Hawkins, D. M. ★Identification of outliers. **81m:62002**
Hinkley, David V. *See* **Cox, David Roxbee, 81c:62001**
Ibragimov, I. A. (*with* Has′minskiĭ, R. Z.) ★Асимптотическая теория оценивания. (Russian) [Asymptotic theory of estimation] **81h:62004**
Krishnaiah, Paruchuri R. Some developments on simultaneous test procedures. **81h:62005**
Lehmann, Erich ★Проверка статистических гипотез. (Russian) [Testing statistical hypotheses] **81k:62004**
Mihoc, Gheorghe (*with* Craiu, Virgil) ★Tratat de statistică matematică. Vol. III. (Romanian) [Treatise of mathematical statistics. Vol. III] **81g:62003**
Pitman, E. J. G. ★Some basic theory for statistical inference. **81f:62001**
(Prohorov, Ju. V.) *See* **Lehmann, Erich, 81k:62004**

62–03 Historical (must also be assigned at least one classification number from Section 01)

Abeles, Francine Ranking by inversion: a note on C. L. Dodgson. (French and German summaries) **81j:62002**
(Anscombe, F. J.) *See* **Wallis, W. Allen, 81j:62004**
(Carroll, Lewis) *See* **Abeles, Francine, 81j:62002**
Erïov, A. A. Stable methods of estimating parameters (survey). **81c:62002**
(Fisher, R. A.) *See* **Runger, George.** (*See* **81k:01024**) *and* **Hinkley, David V.,** (*See* **81k:01024**)
Herzel, Amato (*with* Leti, Giuseppe) Italian contributions to statistical inference. **81m:62003**
Hinkley, David V. Theory of statistical estimation: the 1925 paper. (*See* **81k:01024**)
(Kruskal, William H.) *See* **Wallis, W. Allen, 81j:62004**
Leti, Giuseppe *See* **Herzel, Amato, 81m:62003**
Neyman, Jerzy Some memorable incidents in probabilistic/statistical studies. **81g:62004**
Runger, George Some numerical illustrations of Fisher's theory of statistical estimation. (*See* **81k:01024**)
Schweder, Tore Scandinavian statistics, some early lines of development. **81j:62003**
Seneta, E. Round the historical work on Bienaymé. **81c:62003**
Wallis, W. Allen The Statistical Research Group, 1942–1945. **81j:62004**

secondary classifications:

Doksum, Kjell A. Some remarks on the achievements of Professor Neyman in the United States. **(81m:01046)**
(Fienberg, Stephen E.) *See* **R. A. Fisher: an appreciation, (81k:01024)**
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Geisser, Seymour Basic theory of the 1922 mathematical statistics paper. (*See* **81k:01024**)
Gillispie, Charles C. Mémoires inédits ou anonymes de Laplace sur la théorie des erreurs, les polynômes de Legendre, et la philosophie des probabilités. (English summary) **(81g:01011)**
Hinkley, David V. Fisher's development of conditional inference. (*See* **81k:01024**)

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Krickeberg, K. Role of Jerzy Neyman in the shaping of the Bernoulli Society. **(81m:01061)**
MacKenzie, D. Karl Pearson and the professional middle class. **(81m:01066)**
Mora, Luciano History and teaching of statistics. (Spanish) **(81a:01001)**
(Neyman, Jerzy) *See* **Doksum, Kjell A., (81m:01046)** *and* **Krickeberg, K., (81m:01061)**
(Pearson, K. R.) *See* **MacKenzie, D., (81m:01066)**
Stigler, Stephen M. An Edgeworth curiosum. **(81h:62056)**
Bibliography:
Fisher, Ronald Aylmer Publications of R. A. Fisher. (*See* **81k:01024**)
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Neyman, Jerzy *See* **Doksum, Kjell A., (81m:01046)**
R. A. Fisher: an appreciation ★R. A. Fisher: an appreciation. **(81k:01024)**

62–04 Explicit machine computation and programs (not the theory of computation or programming)

Gentle, James E. *See* **Kennedy, William J., Jr., 81g:62005**
Gorman, John W. *See* **Knepper, Jay C., 81a:62002**
Jennings, L. S. Simultaneous equations estimation. Computational aspects. **81j:62005**
Kennedy, William J., Jr. (*with* Gentle, James E.) ★Statistical computing. **81g:62005**
Knepper, Jay C. (*with* Gorman, John W.) Statistical analysis of constrained data sets. **81a:62002**

secondary classifications:

Evans, James W. Computer augmentation of experimental designs to maximize $|X'X|$. **(81b:62090)**
Friedman, Jerome H. A tree-structured approach to nonparametric multiple regression. **(81f:62117)**
Richard, J.-F. (*with* Tompa, H.) On the evaluation of poly-t density functions. **(81e:62060)**
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62–06 Proceedings, conferences, etc.

(Aigner, Dennis J.) *See* **Experimental design in econometrics, 81b:62005**
(Anderson, Oliver D.) *See* **Analysing time series, 81f:62002** *and* **Time series, 81k:62006**
(Barrett, Marjorie M.) *See* **Compstat 1980, 81j:62007**
(Bartoszyński, Robert) *See* **Mathematical statistics, 81m:62004**
(Chakravarti, Indra Mohan) *See* **Asymptotic theory of statistical tests and estimation, 81c:62004**
(Clifford, Peter) *See* **Asymptotic theory of statistical tests and estimation, 81c:62004**
(Demidova, M. Š.) *See* **Prediction of the reliability of semiconducting devices, 81j:62008**
(Dent, Warren T.) *See* **Computation in econometric models, 81b:62003**
(Finkel'štein, E. Ja.) *See* **Prediction of the reliability of semiconducting devices, 81j:62008**
(Gamkrelidze, R. V.) *See* **Probability theory, Mathematical statistics, Theoretical cybernetics, 81e:62002**
(Gupta, R. P.) *See* **Multivariate statistical analysis, 81m:62005**
(Hájek, Jaroslav) *See* **Contributions to statistics, 81b:62004**
(Hoeffding, Wassily) *See* **Asymptotic theory of statistical tests and estimation, 81c:62004**
(Hušková, Marie) *See* **Proceedings: Prague Symposium on Asymptotic Statistics, 81c:62005**
(Ibragimov, I. A.) *See* **Studies in mathematical statistics, 81j:62011**
(Ickovič, Z. S.) *See* **Prediction of the reliability of semiconducting devices, 81j:62008**
(Ingles, Owen G.) *See* **Applications of statistics and probability in soil and structural engineering, 81b:62002a** *and* **Applications of statistics and probability in soil and structural engineering, 81b:62002b**
(Jurečková, Jana) *See* **Contributions to statistics, 81b:62004**
(Klonecki, Witold) *See* **Mathematical statistics and probability theory, 81g:62006**
(Koronacki, Jacek) *See* **Mathematical statistics, 81m:62004**
(Kozek, Andrzej) *See* **Mathematical statistics and probability theory, 81g:62006**
(Krishnaiah, Paruchuri R.) *See* **Multivariate analysis, 81a:62004** *and* **Developments in statistics, 81k:62005**
(Mandl, Petr) *See* **Proceedings: Prague Symposium on Asymptotic Statistics, 81c:62005**
(Matsuita, Kameo) *See* **Recent developments in statistical inference and data analysis, 81j:62009**
(McNeil, Don) *See* **Interactive statistics, 81f:62003**
(Medvedev, A. V.) *See* **Adaptive systems and their applications, 81j:62006** *and* **Stochastic control systems, 81j:62010**
(Morris, C. N.) *See* **Experimental design in econometrics, 81b:62005**
(Nikulin, M. S.) *See* **Studies in mathematical statistics, 81j:62011**
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Itogi Nauki i Tehniki ★Теория вероятностей. Математическая статистика. Теоретическая кибернетика. Том 17. (Russian) [Probability theory. Mathematical statistics. Theoretical cybernetics. Vol. 17] **81e:62002**
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★Mathematical statistics. **81m:62004**
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★Interactive statistics. **81f:62003**
Symposium:
Asymptotic Theory of Statistical Tests and Estimation ★Asymptotic theory of statistical tests and estimation. **81c:62004**
Computational Statistics ★Compstat 1980. **81j:62007**
Multivariate Analysis ★Multivariate analysis. V. **81a:62004**
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Time series ★Time series. **81k:62006**
Tokyo ★Recent developments in statistical inference and data analysis. **81j:62009**
Wisła ★Mathematical statistics and probability theory. **81g:62006**

secondary classifications:

(Brockhoff, K.) *See* **Proceedings: Operations Research, (81e:90003a)**
(Dinkelbach, W.) *See* **Proceedings: Operations Research, (81e:90003a)**
(von Dobschütz, L.) *See* **Proceedings: Operations Research, (81e:90003c)**
(Fleischmann, B.) *See* **Proceedings: Operations Research, (81e:90003c)**
(Gaede, K.-W.) *See* **Proceedings: Operations Research, (81e:90003b)**
(Gihman, Ĭ. Ĭ.) *See* **Behavior of systems in random media, (81m:60001)**
(Kall, Peter) *See* **Proceedings: Operations Research, (81e:90003a)** *and* **Recent results in stochastic programming, (81i:90008)**
(Lin'kov, Ju. M.) *See* **Behavior of systems in random media, (81m:60001)**
(Prékopa, András) *See* **Recent results in stochastic programming, (81i:90008)**
(Pressmar, D. B.) *See* **Proceedings: Operations Research, (81e:90003a)** *and* **Proceedings: Operations Research, (81e:90003b)**
(Schneeweiß, Ch.) *See* **Proceedings: Operations Research, (81e:90003b)** *and* **Proceedings: Operations Research, (81e:90003c)**
(Schuster, K.-P.) *See* **Proceedings: Operations Research, (81e:90003b)**
(Schwarze, J.) *See* **Proceedings: Operations Research, (81e:90003c)**
(Seifert, O.) *See* **Proceedings: Operations Research, (81e:90003b)**
(Siraĭdinov, S. H.) *See* **Random processes and mathematical statistics, (81a:60004)** *and* **Limit theorems, random processes and their applications, (81e:60001)**
(Spicher, K.) *See* **Proceedings: Operations Research, (81e:90003a)**
(Steckhan, H.) *See* **Proceedings: Operations Research, (81e:90003c)**
Artificial intelligence ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**
Behavior of systems in random media ★Поведение систем в случайных средах. (Russian) [Behavior of systems in random media] **(81m:60001)**
Berlin ★Proceedings in Operations Research. 8. (German) **(81e:90003b)**
Congress:
AFCET-IRIA ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**
Kiel ★Proceedings in Operations Research. 7. (German) **(81e:90003a)**
Limit theorems, random processes and their applications ★Предельные теоремы, случайные процессы и их приложения. (Russian) [Limit theorems, random processes and their applications] **(81e:60001)**
Mathematical statistics ★Вероятностные процессы и математическая статистика. (Russian) [Random processes and mathematical statistics] **(81a:60004)**
Meeting:
Deutsche Gesellschaft für Operations Research ★Proceedings in Operations Research. 7. (German) **(81e:90003a)**
★Proceedings in Operations Research. 8. (German) **(81e:90003b)**
★Proceedings in Operations Research. 9. (German) **(81e:90003c)**
Stochastic Programming ★Recent results in stochastic programming. **(81i:90008)**
Oberwolfach ★Recent results in stochastic programming. **(81i:90008)**
Operations research ★Proceedings in Operations Research. 7. (German) **(81e:90003a)**
★Proceedings in Operations Research. 8. (German) **(81e:90003b)**
★Proceedings in Operations Research. 9. (German) **(81e:90003c)**
Proceedings:
Operations Research ★Proceedings in Operations Research. 7. (German) **(81e:90003a)**
★Proceedings in Operations Research. 8. (German) **(81e:90003b)**
★Proceedings in Operations Research. 9. (German) **(81e:90003c)**
Random processes ★Предельные теоремы, случайные процессы и их приложения. (Russian) [Limit theorems, random processes and their applications] **(81e:60001)**
Random processes and mathematical statistics ★Вероятностные процессы и математическая статистика. (Russian) [Random processes and mathematical statistics] **(81a:60004)**
Recent results in stochastic programming ★Recent results in stochastic programming. **(81i:90008)**
Recognition of shapes and artificial intelligence ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**
Regensburg ★Proceedings in Operations Research. 9. (German) **(81e:90003c)**
Stochastic programming ★Recent results in stochastic programming. **(81i:90008)**
Toulouse ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**

62–07 Data analysis

Andersen, Erling B. ★Discrete statistical models with social science applications. **81b:62006**
Scott, David W. On optimal and data-based histograms. **81c:62006**
Sibson, Robin The Dirichlet tessellation as an aid in data analysis. **81b:62007**
Tukey, John W. Styles of data analysis, and their implications for statistical computing. **81m:62006**

secondary classifications:

Bates, Douglas M. (*with* Watts, Donald G.) Relative curvature measures of nonlinearity. **(81e:62070)**
Carroll, J. Douglas (*with* Pruzansky, Sandra; Kruskal, Joseph B.) CANDELINC: a general approach to multidimensional analysis of many-way arrays with linear constraints on parameters. **(81d:62051)**
Escoufier, Yves (*with* Robert, Pierre) Choosing variables and metrics by optimizing the RV-coefficient. **(81d:62052)**
Exploratory data analysis when data are matrices. (French summary) **(81m:62103)**
Heiser, Willem *See* **de Leeuw, Jan, (81c:62069)**
Kruskal, Joseph B. *See* **Carroll, J. Douglas; et al., (81d:62051)**
de Leeuw, Jan (*with* Heiser, Willem) Multidimensional scaling with restrictions on the configuration. **(81c:62069)**
McDonald, Roderick P. (*with* Torii, Yukihiko; Nishisato, Shizuhiko) Some results on proper eigenvalues and eigenvectors with applications to scaling. **(81b:62078)**
Nishisato, Shizuhiko *See* **McDonald, Roderick P.; et al., (81b:62078)**
Pruzansky, Sandra *See* **Carroll, J. Douglas; et al., (81d:62051)**
Robert, Pierre *See* **Escoufier, Yves, (81d:62052)**
Sclove, Stanley L. The occurrence of fingerprint characteristics as a two-dimensional process. **(81b:62100)**
Sibson, Robin A vector identity for the Dirichlet tessellation. **(81g:52008)**
Torii, Yukihiko *See* **McDonald, Roderick P.; et al., (81b:62078)**
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62Axx Foundations

62A05 Invariance and group considerations

Ahmad, Rashid (*with* Peterson, Magnus M.) Restricted permutation symmetry and hypotheses-generating groups in statistics. **81a:62005**
Fourt, Guy Étude géométrique de l'analyse de la variance multidimensionnelle. **81i:62003**
Peterson, Magnus M. *See* **Ahmad, Rashid, 81a:62005**

secondary classifications:

(Bruter, C. P.) *See* **Largeault, J., (81i:03007)**
Dawid, A. P. Conditional independence in statistical theory. **(81e:62001)**
Golubev, G. K. Computation of efficiency of maximum-likelihood estimate when observing a discontinuous signal in white noise. **(81j:62172)**
Largeault, J. ★Hasards, probabilités, inductions. (French) [Chance, probabilities and induction] **(81i:03007)**
Ng, Vee Ming On the estimation of parametric density functions. **(81h:62077)**
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62A10 The likelihood approach

Akaike, Hirotugu On the transition of the paradigm of statistical inference. (Japanese. English summary) **81j:62012**
Bacharach, Michael Normal Bayesian dialogues. **81k:62007**
Brenner, David (*with* Fraser, Donald Alexander Stuart) An analytic-algebraic approach to statistical models and inference. **81j:62013**
Fraser, Donald Alexander Stuart *See* **Brenner, David, 81j:62013**
Godambe, V. P. On Birnbaum's axiom of mathematically equivalent experiments. **81d:62001**
Hinkley, David V. Predictive likelihood. **81m:62007a**
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Jensen, Eva Bjørn The asymptotic difference between the likelihood and plausibility functions in exponential families. **81i:62004**
Simons, Gordon Extensions of the stochastic ordering property of likelihood ratios. **81m:62008**

secondary classifications:

El-Shaarawi, A. H. Inference about the general linear model. **(81h:62130)**
Haq, M. Safiul (*with* Ng, Vee Ming) On marginal likelihood inference for the intra-class correlation coefficient. **(81i:62101)**
Ng, Vee Ming *See* **Haq, M. Safiul, (81i:62101)**

62A15 The Bayesian approach

Atkinson, A. C. Posterior probabilities for choosing a regression model. **81d:62002**
Fomby, Thomas B. (*with* Guilkey, David K.) On choosing the optimal level of significance for the Durbin-Watson test and the Bayesian alternative. **81b:62008**
Guilkey, David K. *See* **Fomby, Thomas B., 81b:62008**
Howson, Colin (*with* Oddie, Graham) Miller's so-called paradox of information. **81d:62003**
Meeden, Glen Comparing two probability appraisers. **81a:62006**
Oddie, Graham *See* **Howson, Colin, 81d:62003**

Rosenkrantz, Roger D. Bayesian theory appraisal: a reply to Seidenfeld. **81b:62009b**
Schütt, Klaus-P. A model to support the assessment of subjective probabilities. **81h:62006**
Seidenfeld, Teddy Why I am not an objective Bayesian; some reflections prompted by Rosenkrantz. **81b:62009a**

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Akaike, Hirotugu On the transition of the paradigm of statistical inference. (Japanese. English summary) **(81j:62012)**
Brown, R. V. *See* **Lindley, Dennis V.; et al., (81b:60003)**
Diaconis, Persi (*with* Freedman, David A.) de Finetti's theorem for Markov chains. **(81f:60090)**
Ferrari, Pier Alda An interpretation of the beta random variable. (Italian. English and French summaries) **(81m:62023)**
Freedman, David A. *See* **Diaconis, Persi, (81f:60090)**
(Kyburg, Henry E., Jr.) *See* **Studies in subjective probability, (81l:60003)**
Levi, Isaac On indeterminate probabilities. **(81g:90017)**
Lindley, Dennis V. (*with* Tversky, A.; Brown, R. V.) On the reconciliation of probability assessments. **(81b:60003)**
(Smokler, Howard E.) *See* **Studies in subjective probability, (81l:60003)**
Tversky, A. *See* **Lindley, Dennis V.; et al., (81b:60003)**
Probability ★Studies in subjective probability. **(81l:60003)**
Studies in subjective probability ★Studies in subjective probability. **(81l:60003)**

62A20 The classical approach

Basu, D. Randomization analysis of experimental data: the Fisher randomization test. **81m:62009**
Hinkley, David V. Likelihood as approximate pivotal distribution. **81l:62005**
See also **Basu, D., 81m:62009**
Kempthorne, Oscar Some aspects of statistics, sampling, and randomization. **81d:62004**
See also **Basu, D., 81m:62009**
(Lane, David A.) *See* **Basu, D., 81m:62009**
(Lindley, Dennis V.) *See* **Basu, D., 81m:62009**
(Rubin, Donald B.) *See* **Basu, D., 81m:62009**

secondary classifications:

Godambe, V. P. On sufficiency and ancillarity in the presence of a nuisance parameter. **(81j:62016)**

62A25 The structural approach

Bernholtz, Ben *See* **Tan, Peter, 81f:62004**
Tan, Peter (*with* Bernholtz, Ben) Applications of structural models in statistics. **81f:62004**

secondary classifications:

Brenner, David (*with* Fraser, Donald Alexander Stuart) An analytic-algebraic approach to statistical models and inference. **(81j:62013)**
Fraser, Donald Alexander Stuart *See* **Brenner, David, (81j:62013)**

62A30 The fiducial approach

James, A. T. (*with* Venables, W.) Interval estimates for a bivariate principal axis. **81e:62003**
Plante, André On the validation of fiducial techniques. (French summary) **81h:62007**
Venables, W. *See* **James, A. T., 81e:62003**

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Ahmad, Rashid A discussion of some basic concepts in statistical inference. **81j:62014**
Constantini, Domenico The "method of results" and the ground-hypotheses. (Italian. English and French summaries) **81b:62010**
Dale, A. I. Personal probabilities of probabilities in the case of sampling without replacement. **81g:62007**
Dawid, A. P. Some misleading arguments involving conditional independence. **81g:62008**
Kandel, Abraham On fuzzy statistics. **81k:62008**
Levi, Isaac Coherence, regularity and conditional probability. **81h:62008**
Plante, André Structured probability statements. (French summary) **81h:62009**

secondary classifications:

Basu, D. Randomization analysis of experimental data: the Fisher randomization test. **(81m:62009)**
Galavotti, Maria Carla Remarks on the foundations of statistical explanation. (Italian. English and French summaries) **(81f:03008)**
(Hinkley, David V.) *See* **Basu, D., (81m:62009)**
(Kempthorne, Oscar) *See* **Basu, D., (81m:62009)**
(Lane, David A.) *See* **Basu, D., (81m:62009)**
Lindley, Dennis V. *See* **Novick, Melvin R., (81a:90038)** *and* **Basu, D., (81m:62009)**
Novick, Melvin R. (*with* Lindley, Dennis V.) Fixed-state assessment of utility functions. **(81a:90038)**
(Rubin, Donald B.) *See* **Basu, D., (81m:62009)**
Weerahandi, Samaradasa (*with* Zidek, James V.) A characterization of the general mean. (French summary) **(81a:60027)**
Zidek, James V. *See* **Weerahandi, Samaradasa, (81a:60027)**

62Bxx Sufficiency

62B05 Sufficient statistics and fields

Barankin, Edward W. (*with* Kudō, Hirokichi; Kusama, Tokitake) Specification of statistical models by sufficiency. **81m:62010**
Decell, Henry P., Jr. *See* **Peters, B. Charles, Jr.; et al., 81i:62007**
Diedrich, U. (*with* Krafft, Olaf) Statistical sufficiency—the reverse problem. **81d:62005**
Krafft, Olaf *See* **Diedrich, U., 81d:62005**
Kudō, Hirokichi *See* **Barankin, Edward W.; et al., 81m:62010**
Kusama, Tokitake *See* **Barankin, Edward W.; et al., 81m:62010**
Pathak, P. K. Note on Basu's lemma. **81e:62004**
Perez, Albert Simplifications ε-admissibles de la structure de dépendance d'un ensemble de variables aléatoires. (English summary) **81i:62006**
Peters, B. Charles, Jr. (*with* Redner, Richard; Decell, Henry P., Jr.) Characterizations of linear sufficient statistics. **81i:62007**
Redner, Richard *See* **Peters, B. Charles, Jr.; et al., 81i:62007**
Speed, T. P. A factorisation theorem for adequate statistics. **81j:62015**

secondary classifications:

Bahadur, R. R. A note on UMV estimates and ancillary statistics. **(81j:62018)**
Dawid, A. P. Conditional independence in statistical theory. **(81e:62001)**
Peers, H. W. Second-order sufficiency and statistical invariants. **(81c:62035)**
Suzuki, Takeru Asymptotic sufficiency up to higher orders and its applications to statistical tests and estimates. **(81c:62034)**

62B10 Statistical information theory

Bernardo Herranz, José-Miguel The concept of approximation in statistical methodology. (Spanish. English summary) **81k:62009**
Bhattacharyya, G. K. *See* **Mehrotra, Kishan G.; et al., 81h:62010**
Boekee, D. E. Generalized Fisher information with application to estimation problems. **81i:62008**
Fahrion, Roland *See* **Kofler, E.; et al., 81i:62009**
Ferentinos, K. K. (*with* Papaioannou, T.) Loss of information due to groupings. **81d:62006**
Godambe, V. P. On sufficiency and ancillarity in the presence of a nuisance parameter. **81j:62016**
Huschens, S. *See* **Kofler, E.; et al., 81i:62009**
Johnson, Richard A. *See* **Mehrotra, Kishan G.; et al., 81h:62010**
Kofler, E. (*with* Menges, G.; Fahrion, Roland; Huschens, S.; Kuß, Uwe) Stochastische partielle Information (SPI). **81i:62009**
Kuß, Uwe *See* **Kofler, E.; et al., 81i:62009**
Landsman, Z. M. Asymptotic behavior of the Fisher information in the case of a family with location and scale parameters. (Russian) **81m:62011**
Lindsay, B. G. Nuisance parameters, mixture models and the efficiency of partial likelihood estimators. **81k:62010**
Mehrotra, Kishan G. (*with* Johnson, Richard A.; Bhattacharyya, G. K.) Exact Fisher information for censored samples and the extended hazard rate functions. **81h:62010**
Menges, G. *See* **Kofler, E.; et al., 81i:62009**
Papaioannou, T. *See* **Ferentinos, K. K., 81d:62006**
Veres Ferrer, Ernesto Utility and information. (Spanish. English summary) **81g:62009**
The concavity of the expected information. (Spanish. English summary) **81k:62011**

secondary classifications:

Aggarwal, Nand Lal (*with* Bouchon, Bernadette) Minimum of *h*-divergence and maximum likelihood estimator. **(81m:62043)**
Akaike, Hirotugu The interpretation of improper prior distributions as limits of data-dependent proper prior distributions. **(81h:62062)**
Bouchon, Bernadette *See* **Aggarwal, Nand Lal, (81m:62043)**
Cox, David Roxbee Local ancillarity. **(81k:62044)**
Ghosh, J. K. (*with* Sinha, Bimal Kumar; Wieand, H. S.) Second order efficiency of the MLE with respect to any bounded bowl-shaped loss function. **(81g:62057)**
Gill, Christine A. (*with* Joanes, Derrick N.) Bayesian estimation of Shannon's index of diversity. **(81h:62065)**
Hinkley, David V. Likelihood inference for a simple growth model. **(81a:62024)**
Joanes, Derrick N. *See* **Gill, Christine A., (81h:62065)**
Khan, A. Basar On an axiomatic characterization of entropy of order α (theoretic measure). **(81c:94011)**
Klebanov, L. B. (*with* Melamed, I. A.) The stability of characterization of normal and gamma distributions by the properties of Fisher information. (Russian. Georgian and English summaries) **(81l:62027)**
Leamer, Edward E. Comment on: "Information criteria for discriminating among alternative regression models" by T. Sawa. **(81a:62071b)**
Longo, Giuseppe (*with* Sgarro, Andrea) The error exponent for the testing of simple statistical hypotheses: a combinatorial approach. **(81m:62040)**
Martínez-Echevarría, Miguel A. Entropy as a measure of the "goodness of prediction" in dynamic situations. (Spanish) **(81i:94012)**
Melamed, I. A. *See* **Klebanov, L. B., (81l:62027)**
Müller, D. W. Asymptotically multinomial experiments and the extension of a theorem of Wald. **(81j:62017)**
Poritz, Darwin H. The representation of partial knowledge as a linear-convex set of probability distributions. (French summary) **(81f:62054)**
Preuss, Lucien G. A class of statistics based on the information concept. **(81k:62077)**
Sawa, Takamitsu Information criteria for discriminating among alternative regression models. **(81a:62071a)**
See also **Leamer, Edward E., (81a:62071b)**
Sgarro, Andrea *See* **Longo, Giuseppe, (81m:62040)**

Sinha, Bimal Kumar *See* **Ghosh, J. K.; et al., (81g:62057)**
Theil, Henri The entropy of the maximum entropy distribution. **(81m:94016)**
Wieand, H. S. *See* **Ghosh, J. K.; et al., (81g:62057)**

62B15 Comparison of experiments

Heyer, Herbert Invariante Markoff-Kerne und der Vergleich von Translationsexperimenten. (English summary) **81h:62011**
Müller, D. W. Asymptotically multinomial experiments and the extension of a theorem of Wald. **81j:62017**
Mussmann, Dieter Equivalent statistical experiments. **81g:62010**
Suzuki, Takeru A remark on asymptotic sufficiency up to higher orders in multidimensional parameter case. **81f:62005**

62B20 Measure-theoretic results, etc.

Bahadur, R. R. A note on UMV estimates and ancillary statistics. **81j:62018**
Flacke, Werner (*with* Therstappen, Norbert) Bayesian sufficient statistics and invariance. (French summary) **81j:62019**
Therstappen, Norbert *See* **Flacke, Werner, 81j:62019**

secondary classifications:

Diaconis, Persi (*with* Freedman, David A.) de Finetti's generalizations of exchangeability. **(81m:60033)**
Diedrich, U. (*with* Krafft, Olaf) Statistical sufficiency—the reverse problem. **(81d:62005)**
Freedman, David A. *See* **Diaconis, Persi, (81m:60033)**
Krafft, Olaf *See* **Diedrich, U., (81d:62005)**

62B99 None of the above, but in this section

secondary classifications:

Dawid, A. P. Some misleading arguments involving conditional independence. **(81g:62008)**

62Cxx Decision theory [See also 90A05; for game theory, see 90Dxx.]

secondary classifications:

Berger, James O. ★Statistical decision theory: foundations, concepts, and methods. **(81k:62003)**

62C05 General considerations

Frank, Ove (*with* Karlsson, Gösta) Inferences concerning interpersonal choices given anonymously. **81i:62010**
Harris, Bernard (*with* Heindl, Gerhard) The relation between statistical decision theory and approximation theory. **81a:62007**
Heindl, Gerhard *See* **Harris, Bernard, 81a:62007**
Hill, Bruce M. Decision theory. (*See* **80f:62002**)
Karlsson, Gösta *See* **Frank, Ove, 81i:62010**
Neimark, Ju. I. A class of decision rules. (Russian) **81m:62012**
Preda, Vasile Strict determination of a statistical decision problem. **81f:62006**
Ricciardi, N. (*with* Salinetti, Gabriella) Quasiadmissibility in general decision theory. (Italian. English summary) **81e:62005**
Rios, Sixto On certain practical criteria for ordering decisions in an uncertain environment. (Spanish) **81h:62012**
Rosenkrantz, Roger D. Suppes on probability, utility, and decision theory. (*See* **80m:01040**)
Salinetti, Gabriella *See* **Ricciardi, N., 81e:62005**
(Suppes, Patrick) *See* **Rosenkrantz, Roger D., (*See* 80m:01040)**

secondary classifications:

Niederhausen, Heinrich Methoden zur Berechnung exakter Verteilungen vom Kolmogorov-Smirnov-Typ. **(81k:62067)**
Ricciardi, N. (*with* Salinetti, Gabriella) A new characterization of admissibility in decision theory. (Italian. English summary) **(81f:62011)**
Salinetti, Gabriella *See* **Ricciardi, N., (81f:62011)**

62C07 Complete class results

Preda, Vasile Upon the completeness of the class of Bayes solutions in the wide sense. **81h:62013**

secondary classifications:

Abel, Volker Some essentially complete classes for Bayesian multistage sampling inspection. **(81j:62167)**
Brown, Lawrence D. (*with* Cohen, Arthur; Strawderman, William E.) Complete classes for sequential tests of hypotheses. **(81b:62095)**
A necessary condition for admissibility. **(81f:62010)**
Cohen, Arthur *See* **Brown, Lawrence D.; et al., (81b:62095)**
Hellmann, Piotr On two-sided nonparametric tests for the two-sample problem. **(81h:62081)**
Marden, John (*with* Perlman, Michael D.) Invariant tests for means with covariates. **(81b:62071)**
Perlman, Michael D. *See* **Marden, John, (81b:62071)**
Pfanzagl, J. (*with* Wefelmeyer, W.) An asymptotically complete class of tests. **(81i:62044)**
(*with* Wefelmeyer, W.) Addendum to: "A third-order optimum property of the maximum likelihood estimator" [J. Multivariate Anal. **8** (1978), no. 1, 1–29; MR 80c:62037]. **(81c:62033)**
Ricciardi, N. (*with* Salinetti, Gabriella) Quasiadmissibility in general decision theory. (Italian. English summary) **(81e:62005)**
Salinetti, Gabriella *See* **Ricciardi, N., (81e:62005)**
Strawderman, William E. *See* **Brown, Lawrence D.; et al., (81b:62095)**
Wefelmeyer, W. *See* **Pfanzagl, J., (81c:62033)** *and* **Pfanzagl, J., (81i:62044)**

62C10 Bayesian problems; characterization of Bayes procedures

Anderson, Brian D. O. *See* **Potter, John M., 81g:62012**
Berger, Roger L. Gamma minimax robustness of Bayes rules. **81i:62011**
Berry, Donald A. (*with* Christensen, Ronald) Empirical Bayes estimation of a binomial parameter via mixtures of Dirichlet processes. **81m:62013**
Bunn, Derek W. On the use of Bayesian composite predictors in decision analysis. **81f:62007**
Christensen, Ronald *See* **Berry, Donald A., 81m:62013**
Cochlar, Jiří The optimum sequential test of a finite number of hypotheses for statistically dependent observations. **81i:62012**
Moore, Marc Choix séquentiel des points échantillonnaux pour reconstruire un schéma ordonné. **81i:62013**
Nogami, Yoshiko The set-compound one-stage estimation in the nonregular family of distributions over the interval $(0, \theta)$. **81g:62011**
Potter, John M. (*with* Anderson, Brian D. O.) Partial prior information and decision-making. **81g:62012**
Raoult, Jean-Pierre (*with* Tayar, Abdelhamid) Rangement en contexte aléatoire. (English summary) **81i:62014**
Singh, Ashok K. Testing multiple slippages. (French summary) **81j:62020**
Tayar, Abdelhamid *See* **Raoult, Jean-Pierre, 81i:62014**

secondary classifications:

Akbari, Alireza (*with* Hess, James; Kagiwada, Harriet; Kalaba, Robert) The equivalence of team theory's integral equations and a Cauchy system: sensitivity analysis of a variational problem. **(81c:90003)**
Chiu, W. K. (*with* Leung, M. P. Y.) A new Bayesian approach to quality control charts. **(81m:62184)**
Cox, T. F. *See* **Glasebrook, K. D., (81d:62075)**
Dalal, S. R. A note on the adequacy of mixtures of Dirichlet processes. **(81c:62008)**
Dirichlet invariant processes and applications to nonparametric estimation of symmetric distribution functions. **(81e:62039)**
Glasebrook, K. D. (*with* Cox, T. F.) On the design of efficient experiments for choosing between two Bernoulli populations. **(81d:62075)**
Györfi, L. (*with* Györfi, Z.; Vajda, Igor) Bayesian decision with rejection. **(81k:62117)**
Györfi, Z. *See* **Györfi, L.; et al., (81k:62117)**
Hamerle, Alfred (*with* Kemény, P.) Zur Bestimmung von Bayes-Lösungen bei messender Prüfung. (English and Russian summaries) **(81a:62101)**
Hess, James *See* **Akbari, Alireza; et al., (81c:90003)**
Kagiwada, Harriet *See* **Akbari, Alireza; et al., (81c:90003)**
Kalaba, Robert *See* **Akbari, Alireza; et al., (81c:90003)**
Kemény, P. *See* **Hamerle, Alfred, (81a:62101)**
Leung, M. P. Y. *See* **Chiu, W. K., (81m:62184)**
Mamatkulov, O. Optimal choice of the acceptance number in statistical quality control with fixed sample size. (Russian) **(81f:62150)**
Pilz, Jürgen Konstruktion von optimalen diskreten Versuchsplänen für eine Bayes-Schätzung im linearen Regressionsmodell. (English and Russian summaries) (*See* **81k:62103**)
Das bayessche Schätzproblem im linearen Regressionsmodell. (English and Russian summaries) (*See* **81k:62103**)
Entscheidungstheoretische Darstellung des Problems der bayesschen Schätzung und Versuchsplanung im linearen Regressionsmodell. (English and Russian summaries) (*See* **81k:62103**)
Preda, Vasile Upon the completeness of the class of Bayes solutions in the wide sense. **(81h:62013)**
Schütt, Klaus-P. A model to support the assessment of subjective probabilities. **(81h:62006)**
Smith, J. Q. Mixture catastrophes and Bayes decision theory. **(81a:58016)**
Vajda, Igor *See* **Györfi, L.; et al., (81k:62117)**

62C12 Empirical decision procedures

Bunke, Helga (*with* Gladitz, J.) Empirical Bayes approach to parameter identification in linear stochastic difference equations. (German and Russian summaries) **81h:62014**
Cubeddu, C. (*with* Targhetta, M. Luisa) On the construction of an asymptotically optimal estimate. (Italian. English summary) **81k:62015**
Gladitz, J. *See* **Bunke, Helga, 81h:62014**
Haff, L. R. Empirical Bayes estimation of the multivariate normal covariance matrix. **81f:62008**
Hudimoto, Hirosi Empirical Bayes two-way decision in the case of discrete distributions. **81m:62014**
Laippala, Pekka The empirical Bayes approach with floating optimal sample size in binomial experimentation. **81j:62021a**
Correction note: "The empirical Bayes approach with floating optimal sample size in binomial experimentation". **81j:62021b**
Laird, Nan M. Empirical Bayes methods for two-way contingency tables. **81i:62015**
Phadia, E. G. A note on empirical Bayes estimation of a distribution function based on censored data. **81f:62009**

Susarla, V. (*with* Van Ryzin, John) Empirical Bayes estimation of a distribution (survival) function from right-censored observations. **81h:62016**
Targhetta, M. Luisa *See* **Cubeddu, C., 81h:62015**
Van Ryzin, John *See* **Susarla, V., 81h:62016**
Vardeman, Stephen B. Bounds on the empirical Bayes and compound risks of truncated versions of Robbins's estimator of a binomial parameter. **81h:62017**

secondary classifications:

Hudimoto, Hirosi On the empirical Bayes approach to classification in the case of discrete multivariate distribution having only finite mass points. **(81c:62067)**
Robbins, Herbert Some estimation problems for the compound Poisson distribution. **(81j:62067)**
Sommer, J. Empirische Bayes-Schätzverfahren bei quadratischer Schadensfunktion. (English summary) **(81m:62049)**

62C15 Admissibility

Brown, Lawrence D. A necessary condition for admissibility. **81f:62010**
Examples of Berger's phenomenon in the estimation of independent normal means. **81i:62016**
Haff, L. R. Estimation of the inverse covariance matrix: random mixtures of the inverse Wishart matrix and the identity. **81b:62011**
Khan, Rasul A. A note on the admissibility of Hammersley's estimator of an integer mean. (French summary) **81j:62022**
Ledwina, Teresa Admissible tests for exponential families with finite support. (German and Russian summaries) **81b:62012**
Admissible tests for contingency tables and Poisson's distributions. II. (German and Russian summaries) **81i:62017**
Ricciardi, N. (*with* Salinetti, Gabriella) A new characterization of admissibility in decision theory. (Italian. English summary) **81f:62011**
Salinetti, Gabriella *See* **Ricciardi, N., 81f:62011**
Tsui, Kam Wah (*with* Weerahandi, Samaradasa; Zidek, James V.) Inadmissibility of the best fully equivariant estimator of the generalized residual variance. **81m:62015**
Weerahandi, Samaradasa *See* **Tsui, Kam Wah; et al., 81m:62015**
Zidek, James V. *See* **Tsui, Kam Wah; et al., 81m:62015**

secondary classifications:

Arnold, Barry C. *See* **Meeden, Glen, (81b:62031)**
Berger, Roger L. (*with* Gupta, Shanti S.) Minimax subset selection rules with applications to unequal variance (unequal sample size) problems. **(81k:62029)**
Biyani, Shriram H. On inadmissibility of the Yates-Grundy variance estimator in unequal probability sampling. **(81j:62024)**
Brown, Lawrence D. (*with* Cohen, Arthur; Strawderman, William E.) On the admissibility or inadmissibility of fixed sample size tests in a sequential setting. **(81i:62138)**
Cohen, Arthur *See* **Brown, Lawrence D.; et al., (81i:62138)**
Gupta, Shanti S. *See* **Berger, Roger L., (81k:62029)**
Haff, L. R. An identity for the Wishart distribution with applications. **(81c:62055)**
Kuß, Uwe Ein Schätzverfahren von Menges und Diehl und die Maximum-Probability-Methode. (English, French and Russian summaries) **(81h:62059)**
Liski, Erkki On reduced risk estimation in linear models. **(81d:62061)**
Meeden, Glen (*with* Arnold, Barry C.) The admissibility of a preliminary test estimator when the loss incorporates a complexity cost. **(81b:62031)**
Strawderman, William E. *See* **Brown, Lawrence D.; et al., (81i:62138)**
Takada, Yoshikazu Stein's positive part estimator and Bayes estimator. **(81b:62069)**
Tsui, Kam Wah Multiparameter estimation of discrete exponential distributions. (French summary) **(81e:62062a)**
Estimation of Poisson means under weighted squared error loss. (French summary) **(81e:62062b)**

62C20 Minimax procedures

Cohen Brandwein, Ann R. Minimax estimation of the mean of spherically symmetric distributions under general quadratic loss. **81f:62012**
(*with* Strawderman, William E.) Minimax estimation of location parameters for spherically symmetric distributions with concave loss. **81e:62006**
Faith, Ray E. Minimax Bayes estimators of a multivariate normal mean. **81j:62023**
Musiela, Marek Admissible and minimax estimation for two classes of stochastic processes. (Russian summary) **81m:62016**
Różański, Roman $G_{1,-1}$-minimax estimation of the parameters of a distribution of exponential type. (Polish) **81b:62013**
Strawderman, William E. *See* **Cohen Brandwein, Ann R., 81e:62006**

secondary classifications:

Beichelt, Frank Minimax inspection strategies if expected system lifetime is known. **(81c:62108)**
Berger, Roger L. Minimax subset selection for loss measured by subset size. **(81g:62045)**
Brown, P. J. (*with* Zidek, James V.) Adaptive multivariate ridge regression. **(81i:62119)**
Campbell, Gregory (*with* Hollander, Myles) Nonparametric Bayes estimation with incomplete Dirichlet prior information. **(81e:62036)**
Chakravorti, S. R. (*with* Giri, N. C.) Locally minimax test of the equality of two covariance matrices. **(81h:62095)**
Giri, N. C. *See* **Chakravorti, S. R., (81h:62095)**
Groenewald, P. C. N. (*with* van der Merwe, A. J.) Asymptotic distributions for the Stein estimator in multiple regression. **(81j:62133)**
Hoffmann, Kurt Characterization of minimax linear estimators in linear regression. (German and Russian summaries) **(81g:62119)**
Hollander, Myles *See* **Campbell, Gregory, (81e:62036)**
Iliescu, Dan V. (*with* Vodă, Viorel Gh.) Some notes on Pareto distribution. **(81g:62050)**
Kockelkorn, U. Ein lineares Mehrentscheidungsmodell. (English summary) **(81d:90106)**
Le Cam, L. On a theorem of J. Hájek. **(81f:62057)**
van der Merwe, A. J. *See* **Groenewald, P. C. N., (81j:62133)**
Nishi, Akihiro On the method of H. Chernoff in classificatory problem between two categories with specified 2^kth moment ($k=0,1,2$). **(81b:62077)**
Petruccelli, Joseph D. On a best choice problem with partial information. **(81m:62154)**
Preda, Vasile Strict determination of a statistical decision problem. **(81f:62006)**
Robertson, Tim (*with* Wright, F. T.) Algorithms in order restricted statistical inference and the Cauchy mean value property. **(81m:62047)**
Roeder, B. *See* **Toutenburg, H., (81d:62065)**
Toutenburg, H. (*with* Roeder, B.) Minimax-linear and Theil estimator for restrained regression coefficients. (German and Russian summaries) **(81d:62065)**
Vaatmann, V. Minimax estimation of random vectors. (Russian summary) **(81b:62056)**
Vodă, Viorel Gh. *See* **Iliescu, Dan V., (81g:62050)**
Wright, F. T. *See* **Robertson, Tim, (81m:62047)**
Zidek, James V. *See* **Brown, P. J., (81i:62119)**

62C25 Compound decision problems

Lefort, G. Choix d'une hypothèse dans une suite finie: méthode et applications. (English summary) **81h:62018**
Singh, Radhey S. Sequence-compound estimation in scale-exponential families and speed of convergence. **81k:62012**

secondary classifications:

Aczel, Janos (*with* Wagner, Carl G.) A characterization of weighted arithmetic means. **(81m:39012)**
Wagner, Carl G. *See* **Aczel, Janos, (81m:39012)**

62C99 None of the above, but in this section

Firchau, V. Der maximale Wert der Information. (English summary) **81i:62018**

secondary classifications:

Čencov, N. N. On the correctness of a statistical point estimation problem. (Russian. English summary) **(81c:62047)**
Escuder Valles, Roberto The structure of a space of mixtures and of probability spaces. (Spanish) **(81j:62052)**
Wittman, Donald Power in electoral games. **(81i:90232)**

62D05 Sampling theory, sample surveys

Agarwal, S. K. (*with* Singh, M.; Goel, B. B. P. S.) Use of p-auxiliary variates in pps sampling. **81g:62013**
Ahsan, M. J. A procedure for the problem of optimum allocation in multivariate stratified random sampling. **81a:62008**
Akoka, J. (*with* Dayan, H.) Stratified sampling: determination of optimal sample sizes by discrete nonlinear optimization. (*See* **81j:62007**)
Anderson, Dallas W. (*with* Kish, Leslie; Cornell, Richard G.) On stratification, grouping and matching. **81g:62014**
Anderson, Harald On nonresponse bias and response probabilities. **81d:62007**
Arnab, R. *See* **Chaudhuri, Arijit, 81e:62007**
Asok, C. A note on the comparison between simple mean and mean based on distinct units in sampling with replacement. **81f:62013**
Basulto, Jesús A bivariate predictive model for finite homogeneous populations. (Spanish) **81i:62019**
Bellhouse, D. R. Computation of variance-covariance estimates for general multistage sampling designs. **81m:62017**
Biyani, Shriram H. On inadmissibility of the Yates-Grundy variance estimator in unequal probability sampling. **81j:62024**
Bowden, David C. *See* **Otis, David, 81i:62023**
Brewer, K. R. W. A class of robust sampling designs for large-scale surveys. **81b:62014**
See also **Scott, A. J.; et al., 81f:62020**
Burdick, Richard K. (*with* Sielken, Robert L., Jr.) Variance estimation based on a superpopulation model in two-stage sampling. **81b:62015**
Chaudhuri, Arijit (*with* Mukhopadhyay, Parimal) A note on how to choose the sample size for Horvitz-Thompson estimation. **81d:62008**
On estimating the variance of a finite population. **81f:62014**
(*with* Arnab, R.) On estimating the mean of a finite population sampled on two occasions with varying probabilities. **81e:62007**
Chen, Shan Huo *See* **Yanagawa, Takashi, 81m:62020**
Cornell, Richard G. *See* **Anderson, Dallas W.; et al., 81g:62014**
Cox, David Roxbee (*with* Snell, E. J.) On sampling and the estimation of rare errors. **81f:62015**
Dalenius, Tore (*with* Vitale, Richard A.) A new randomized response design for estimating the mean of a distribution. **81d:62009**
Dayan, H. *See* **Akoka, J., (*See* 81j:62007)**
Doss, D. C. (*with* Hartley, H. O.; Somayajulu, G. R.) An exact small sample theory for post-stratification. **81h:62019**
Dupačová, Jitka A note on rejective sampling. **81j:62025**
Dwyer, Paul S. (*with* Tracy, Derrick S.) Expectation and estimation of product moments in sampling from a finite population. **81j:62026**
Ellem, D. (*with* Howson, A.) Randomized response: a survey technique for sensitive questions. (*See* **81f:62003**)
Ewings, P. D. *See* **Holt, D.; et al., 81m:62018**
Fay, Robert E., III (*with* Herriot, Roger A.) Estimates of income for small places: an application of James-Stein procedures to census data. **81c:62007**

Frank, Ove Sampling and inference in a population graph. (French summary) **81h:62020**
Estimation of the number of vertices of different degrees in a graph. **81j:62027**
García-Carrasco Aponte, M.ª Pilar Some cases of optimal allocation of observations. (Spanish. English summary) **81k:62013**
Goel, B. B. P. S. *See* **Agarwal, S. K.; et al., 81g:62013**
Goller, W. *See* **Schneeberger, H., 81l:62024**
Graham, Jack E. (*with* Rao, J. N. K.) Sample surveys: theory and practice. (*See* **80f:62002**)
Hartley, H. O. *See* **Doss, D. C.; et al., 81h:62019**
Hedayat, A. Sampling designs with reduced support sizes. **81h:62020**
Herriot, Roger A. *See* **Fay, Robert E., III, 81c:62007**
Hidiroglou, Michael *See* **Srinath, K. P., 81l:62025**
Ho, E. W. H. *See* **Scott, A. J.; et al., 81f:62020**
Holt, D. (*with* Smith, T. M. F.; Tomberlin, T. J.) A model-based approach to estimation for small subgroups of a population. **81f:62016**
(*with* Scott, A. J.; Ewings, P. D.) Chi-squared tests with survey data. **81m:62018**
Howson, A. *See* **Ellem, D.,** (*See* **81f:62003**)
Hughes, Edward (*with* Rao, J. N. K.) Some problems of optimal allocation in sample surveys involving inequality constraints. **81f:62017**
Islam, Z. *See* **Khan, S. U., 81m:62019**
Jessen, Raymond J. ★Statistical survey techniques. **81d:62010**
Jones, Roger G. Best linear unbiased estimators for repeated surveys. **81l:62021**
Kalton, Graham Ultimate cluster sampling. **81a:62009**
Khan, S. U. (*with* Islam, Z.) Optimum allocation with fixed cost in multivariate stratified sampling. **81m:62019**
Kish, Leslie *See* **Purcell, Noel J., 81b:62016** *and* **Anderson, Dallas W.; et al., 81g:62014**
Konijn, Hendrik S. Bias and mean square error of the ratio estimator and conditions for their validity. **81i:62022**
Koop, J. C. On statistical inference in sample surveys and the underlying role of randomization. **81g:62015**
Lanke, Petter A predictive approach to subdomain estimation in finite populations. **81f:62018**
Lackritz, James R. (*with* Scheaffer, Richard L.) Point sampling in areal-fraction analysis. **81g:62016**
Mączyński, M. J. (*with* Pathak, P. K.) Integration of surveys. **81j:62028**
Martin, R. J. A subclass of lattice processes applied to a problem in planar sampling. **81g:62017**
Miras Amor, Julio Defects in the sampling framework. (Spanish. English summary) **81j:62029**
Mukhopadhyay, Parimal *See* **Chaudhuri, Arijit, 81d:62008**
Otis, David (*with* Bowden, David C.) Testing equality of ratios from two finite populations. **81i:62023**
Pathak, P. K. *See* **Mączyński, M. J., 81j:62028**
Purcell, Noel J. (*with* Kish, Leslie) Estimation for small domains. (French summary) **81b:62016**
Rao, J. N. K. Optimization in the design of sample surveys. **81b:62017**
See also **Hughes, Edward, 81f:62017** *and* **Graham, Jack E.,** (*See* **80f:62002**)
Ray, S. K. (*with* Sahai, Ashok; Sahai, Ajit) A note on ratio and product type estimators. **81f:62019**
(*with* Sahai, Ashok) Efficient families of ratio and product-type estimators. **81g:62018**
Rosén, Bengt A tool for derivation of asymptotic results for sampling and occupancy problems, illustrated by its application to some general capture-recapture sampling problems. **81h:62021**
Sahai, Ajit *See* **Ray, S. K.; et al., 81f:62019**
Sahai, Ashok *See* **Ray, S. K.; et al., 81f:62019** *and* **Ray, S. K., 81g:62018**
Särndal, Carl-Erik A method for assessing efficiency and bias of estimation strategies in survey sampling. **81g:62019**
Scheaffer, Richard L. *See* **Lackritz, James R., 81g:62016**
Schneeberger, H. (*with* Goller, W.) On the problem of the feasibility of optimal stratification points according to Dalenius. **81i:62024**
Scott, A. J. (*with* Brewer, K. R. W.; Ho, E. W. H.) Finite population sampling and robust estimation. **81f:62020**
See also **Holt, D.; et al., 81m:62018**
Sielken, Robert L., Jr. *See* **Burdick, Richard K., 81b:62015**
Singh, M. On the reduction of bias of ratio estimator to a desired degree. **81g:62020**
See also **Agarwal, S. K.; et al., 81g:62013**
Smith, T. M. F. *See* **Holt, D.; et al., 81f:62016**
Snell, E. J. *See* **Cox, David Roxbee, 81f:62015**
Somayajulu, G. R. *See* **Doss, D. C.; et al., 81h:62019**
Srinath, K. P. (*with* Hidiroglou, Michael) Estimation of variance in multistage sampling. **81i:62025**
Srivenkataramana, T. (*with* Tracy, Derrick S.) An alternative to ratio method in sample surveys. **81h:62022**
A dual to ratio estimator in sample surveys. **81e:62008**
Stenger, H. Loss functions and admissible estimators in survey sampling. (German summary) **81a:62010**
Thompson, M. E. Stratified sampling with exchangeable prior distributions. **81d:62011**
Tomberlin, T. J. *See* **Holt, D.; et al., 81f:62016**
Tracy, Derrick S. Expectations in sampling from a multicharactered finite population. **81k:62014**
See also **Srivenkataramana, T., 81h:62022** *and* **Dwyer, Paul S., 81j:62026**
Vilek, Jan Ámos Asymptotic distribution of simple estimate for rejective, Sampford and successive sampling. **81j:62030**
Vitale, Richard A. *See* **Dalenius, Tore, 81d:62009**
Yanagawa, Takashi (*with* Chen, Shan Huo) The MG-procedure in ranked set sampling. **81m:62020**

secondary classifications:

Diggle, Peter J. (*with* Matérn, Bertil) On sampling designs for the study of point-event nearest neighbour distributions in R^2. **81k:62170)**
Dwyer, Paul S. (*with* Mikhail, N. N.; Tracy, Derrick S.) A concise proof of a theorem on products of power sums. (French summary) **81a:62019)**
Easton, M. C. *See* **Wong, C. K., (81a:68054)**
Fienberg, Stephen E. (*with* Picard, Richard R.) Designing surveys for measuring change in categorical data structures over time. **(81h:62100)**
Höglund, Thomas Sampling from a finite population. A remainder term estimate. **(81g:60018)**
Kempthorne, Oscar Some aspects of statistics, sampling, and randomization. **(81d:62004)**
Malik, Henrick J. *See* **Mikhail, N. N., (81a:62020)**
Matérn, Bertil *See* **Diggle, Peter J., (81k:62170)**
Mikhail, N. N. (*with* Malik, Henrick J.) Unbiased estimates of Dwyer's moment function and their products for finite population. **(81a:62020)**
See also **Dwyer, Paul S.; et al., (81a:62019)**
Oman, Samuel D. Estimating a proportion when sampling from a subpopulation. **(81h:62066)**
Picard, Richard R. *See* **Fienberg, Stephen E., (81k:62100)**
Tracy, Derrick S. *See* **Dwyer, Paul S.; et al., (81a:62019)**
Wong, C. K. (*with* Easton, M. C.) An efficient method for weighted sampling without replacement. **(81a:68054)**

62Exx Distribution theory [See also 60Exx.]

62E10 Characterization and structure theory

Ahmed, Muhammad Salahuddin *See* **Hadi, Sabah, 81h:62027**
Alam, S. N. *See* **Kirmani, S. N. U. A., 81g:62023**
Ali, Mir M. Characterization of the normal distribution among the continuous symmetric spherical class. **81g:62021**
Arnold, Barry C. Some characterizations of the Cauchy distribution. **81f:62021**
(*with* Groeneveld, Richard A.) Some properties of the arcsine distribution. **81d:62012**
Beran, Rudolf Exponential models for directional data. **81a:62011**
Bhattacharjee, Manish C. On a characterization of gamma distributions via exponential mixtures. **81h:62023**
Campos, António Dorival Extension of the inequality for the variance of an estimator by Bayesian process. **81g:62022**
Casas Sánchez, José M. Considerations on efficient criteria. (Spanish. English summary) **81b:62018**
Chattopadhyay, A. K. *See* **Gupta, Arjun K., 81c:62009**
Chen, Wen Chen On the weak form of Zipf's law. **81m:62021**
Crockett, N. G. A quick test of fit of a bivariate distribution. (*See* **81f:62003**)
Dalal, S. R. A note on the adequacy of mixtures of Dirichlet processes. **81c:62008**
Dallas, A. C. On the exponential law. **81f:62022**
Efron, Bradley A distance theorem for exponential families. **81m:62022**
El-Neweihi, Emad (*with* Govindarajulu, Z.) Characterizations of geometric distribution and discrete IFR (DFR) distributions using order statistics. **81a:62012**
Engel, Jan (*with* Zijlstra, Mynt) A characterization of the gamma distribution by the negative binomial distribution. **81j:62031**
Ferrari, Pier Alda An interpretation of the beta random variable. (Italian. English and French summaries) **81m:62023**
(Fisher, R. A.) *See* **Mensch, Roy,** (*See* **81k:01024**)
Fraser, Donald Alexander Stuart (*with* Streit, Franz) A further note on the bivariate normal distribution. **81h:62024**
George, E. Olusegun *See* **Mudholkar, Govind S., 81g:62026**
Glevitzky, Béla Some problems of characterization of normal distribution. **81j:62032**
Govindarajulu, Z. *See* **El-Neweihi, Emad, 81a:62012**
Groeneveld, Richard A. *See* **Arnold, Barry C., 81d:62012**
Grosswald, Emil (*with* Kotz, Samuel; Johnson, Norman Lloyd) Characterizations of the exponential distribution by relevation-type equations. **81h:62025**
Gupta, Arjun K. (*with* Chattopadhyay, A. K.) Gammaization and Wishartness of dependent quadratic forms. **81c:62009**
Gyires, B. Constant regression of quadratic statistics on the sample mean. II. **81f:62023**
Hadi, Sabah A note on a class of distributions of positive continuous random variables. (Arabic summary) **81h:62026**
(*with* Ahmed, Muhammad Salahuddin) Determination of power series distributions in one parameter from its cumulants. (Arabic summary) **81h:62027**
Janardan, Konsmur G. (*with* Taneja, V. S.) Some theorems concerning characterization of the Weibull distribution. **81e:62009**
Johnson, Norman Lloyd *See* **Grosswald, Emil; et al., 81h:62025**
Khatri, C. G. The necessary and sufficient conditions for dependent quadratic forms to be distributed as multivariate gamma. **81h:62026**
Kirmani, S. N. U. A. (*with* Alam, S. N.) Characterization of the geometric distribution by the form of a predictor. **81g:62023**
Klebanov, L. B. (*with* Melamed, I. A.) The stability of characterization of normal and gamma distributions by the properties of Fisher information. (Russian. Georgian and English summaries) **81i:62027**
Some problems of characterization of distributions arising in reliability theory. (Russian. German summary) **81e:62010**
Some results connected with the characterization of the exponential distribution. (Russian. German summary) **81k:62015**
Kotz, Samuel (*with* Shanbhag, D. N.) Some new approaches to probability distributions. **81m:62024**
See also **Grosswald, Emil; et al., 81h:62025**
Kronmal, Richard A. *See* **Peterson, Arthur V., Jr., 81m:62025**
Lajkó, K. A characterization of generalized normal and gamma distributions. **81g:62024**

Lukacs, Eugene Stability theorems for characterizations of the normal and of the degenerate distributions. **81g:62025**

Melamed, I. A. *See* **Klebanov, L. B., 81i:62027**

Mensch, Roy Fisher and the method of moments. (*See* **81k:01024**)

Mudholkar, Govind S. (*with* George, E. Olusegun) The logit statistic for combining probabilities—an overview. **81g:62026**

Nagaraja, H. N. Some distributional problems connected with order statistics. **81h:62028**

Oliker, V. I. *See* **Singh, Jagbir, 81b:62019**

Panaretos, J. (*with* Xekalaki, E.) A characteristic property of certain discrete distributions. **81g:62027**

See also **Shanbhag, D. N., 81g:62028**

Peterson, Arthur V., Jr. (*with* Kronmal, Richard A.) A representation for discrete distributions by equiprobable mixtures. **81m:62025**

Pisarewska, Helena A characterization of a family of distributions. **81j:62033**

Ramachandran, B. On the strong Markov property of the exponential laws. **81f:62024**

Samaniego, Francisco J. Maximum likelihood estimation for binomially distributed signals in discrete noise. **81f:62025**

Sarkadi, K. Characterization and testing for normality. **81h:62029**

Shanbhag, D. N. (*with* Panaretos, J.) Some results related to the Rao-Rubin characterization of the Poisson distribution. **81g:62028**

Diagonality of the Bhattacharyya matrix as a characterization. (Russian summary) **81a:62013**

See also **Kotz, Samuel, 81m:62024**

Shimizu, Ryoichi On a lack of memory property of the exponential distribution. **81f:62026**

A characterization of the exponential distribution. **81j:62034**

Functional equation with an error term and the stability of some characterizations of the exponential distribution. **81f:62027**

Singh, Jagbir (*with* Oliker, V. I.) On minimum variance unbiased estimation and characterization of probability densities. **81b:62019**

Srivastava, R. C. *See* **Wang, Y. H., 81c:62010**

Streit, Franz *See* **Fraser, Donald Alexander Stuart, 81h:62024**

Talwalker, Sheela A note on the generalized Rao-Rubin condition and characterization of certain discrete distributions. **81i:62028**

On the property of dullness of Pareto distribution. **81h:62030**

Taneja, V. S. *See* **Janardan, Konanur G., 81e:62009**

Wang, Y. H. (*with* Srivastava, R. C.) A characterization of the exponential and related distributions by linear regression. **81c:62010**

Wong, Wing Yue On set with "lack of memory" property and some applications to the characterization of geometric distribution. **81m:62026**

A characterization of uniform distribution. **81m:62027**

Xekalaki, E. On characterizing the bivariate Poisson, binomial and negative binomial distributions. **81m:62028**

See also **Panaretos, J., 81g:62027**

Zijlstra, Mynt *See* **Engel, Jan, 81j:62031**

secondary classifications:

Alsina, Claudi (*with* Bonet, E.) On sums of dependent uniformly distributed random variables. **(81e:39012)**

Baringhaus, Ludwig Characterization of distributions by random sums. **(81k:60015)**

Bonet, E. *See* **Alsina, Claudi, (81e:39012)**

Brandhofe, Thomas (*with* Davies, P. Laurie) On a functional equation in the theory of linear statistics. **(81f:45013)**

Dalal, S. R. A note on the adequacy of mixtures of Dirichlet processes. **(81c:62008)**

Davies, P. Laurie *See* **Brandhofe, Thomas, (81f:45013)**

Gyires, B. On a characterization of the generalized multinomial distributions. **(81j:62094)**

Hudson, William N. (*with* Tucker, Howard G.) Asymptotic independence in the multivariate central limit theorem. **(81i:60021)**

Hwang, Jun Shung (*with* P'an, Ch'iao Sung; Wu, L. S.) An extension of Bernšteĭn-Müntz-Szász theorem. **(81e:41007)**

Januškevičius, R. V. Estimates of the stability of the characterization of the normal law in G. Pólya's theorem. (Russian. English summary) **(81j:60020)**

Khatri, C. G. Characterization of some discrete distributions by linear regression. **(81h:62087)**

Characterization of some multivariate distributions by conditional distributions and linear regression. **(81h:62088)**

Characterizations of multivariate normality. II. Through linear regressions. **(81j:62095)**

Klebanov, L. B. Some estimators of the proximity of distributions in terms of characteristic functions. (Russian. English summary) **(81k:60024)**

Lajkó, K. On the functional equation $f(x)g(y) = h(ax+by)k(cx+dy)$. **(81k:39007)**

Lukacs, Eugene A characterization of the rectangular distribution. **(81d:60020)**

P'an, Ch'iao Sung *See* **Hwang, Jun Shung; et al., (81e:41007)**

Samejima, Fumiko Latent trait theory and its applications. **(81j:62198)**

Sethuraman, Jayaram Characterization of distributions by large deviation rates. **(81f:60043)**

Shimizu, Ryoichi Solution to a functional equation and its application to some characterization problems. **(81j:60021)**

Tucker, Howard G. *See* **Hudson, William N., (81i:60021)**

Wu, L. S. *See* **Hwang, Jun Shung; et al., (81e:41007)**

62E15 Exact distribution theory

Ahmad, Rashid A characterization of the normal distribution based on the sample mean and the residual vector. **81b:62020**

Ahmed, Muhammad Salahuddin *See* **Hadi, Sabah, 81j:62041**

Alam, Khursheed (*with* Wallenius, K. T.) Distribution of a sum of order statistics. **81c:62011**

Alam, S. N. A note on the distribution of small sample range from normal population. **81d:62013**

Ali, Mir M. *See* **Hoq, A. K. M. Sirajul; et al., 81e:62014**

Arnold, Barry C. Recurrence relations between expectations of functions of order statistics. **81f:62028**

Distribution-free bounds on the mean of the maximum of a dependent sample. **81j:62035**

Awad, Adnan M. Random sum representation of the noncentral chi-square random variable. **81k:62016**

Barnett, Vic Some bivariate uniform distributions. **81f:62029**

Beckman, Richard J. *See* **Johnson, Mark E.; et al., 81f:62032**

Bennett, B. M. On Fisher's distribution of the sample correlation coefficients from a multinormal population. **81i:62029**

Bishop, L. (*with* Fraser, Donald Alexander Stuart; Ng, Kai W.) Some decompositions of spherical distributions. (German, French and Russian summaries) **81c:62012**

Bronk, Burt V. Some inequalities for moments and coefficients of variation for a large class of probability functions. **81j:62036**

Chaubey, Yogendra P. (*with* Mudholkar, Govind S.) A new approximation for Fisher's z. **81j:62037**

Clarke, M. R. B. The reduced major axis of a bivariate sample. **81g:62029**

Cressie, Noel Relaxing assumptions in the one-sample t-test. **81k:62017**

Currie, Iain D. The upper tail of the distribution of W-exponential. **81j:62038**

On the distribution of the Studentized range in a single normal sample. **81j:62039**

Dash, S. P. Exact distribution of the quotient of the products of independent random variables associated with an H-function. **81c:62013**

Diaconis, Persi (*with* Freedman, David A.) On rounding percentages. **81d:62014**

Dyer, Danny D. (*with* Keating, Jerome P.) On the determination of critical values for Bartlett's test. **81f:62030**

Fraser, Donald Alexander Stuart *See* **Bishop, L.; et al., 81c:62012**

Freedman, David A. *See* **Diaconis, Persi, 81d:62014**

George, E. Olusegun (*with* Ojo, M. O.) On a generalization of the logistic distribution. **81k:62018**

Gerstenkorn, Tadeusz Evaluation of the inverse hypergeometric distribution. **81c:62014**

On the recurrence relation for the moments about an arbitrary point of a class of discrete inflated distributions. **81i:62030**

Glaser, Ronald E. A characterization of Bartlett's statistic involving incomplete beta functions. **81f:62031**

Goldgar, David E. *See* **Zerbe, Gary O., 81h:62033**

Gregory, Gavin G. On efficiency and optimality of quadratic tests. **81e:62011**

Gupta, Ramesh C. On negative moments of generalized Poisson distribution. (German and Russian summaries) **81e:62012**

Powers of distribution functions. **81j:62040**

Hadi, Sabah (*with* Ahmed, Muhammad Salahuddin) A method to construct examples of random variables with a power series distribution in one parameter. (Arabic summary) **81j:62041**

Handa, B. R. (*with* Mohanty, Sri Gopal) On Dwass' method for deriving the distribution of rank order statistics. (Czech and Russian summaries) **81e:62013**

Heilmann, Wolf-Rüdiger Basic distribution theory for nonparametric Gini-like measures of location and dispersion. (German summary) **81g:62030**

Holmes, Paul T. *See* **Tosch, Thomas J., 81g:62037**

Hoq, A. K. M. Sirajul (*with* Ali, Mir M.; Templeton, James G. C.) Distribution of Student's ratio based on half-Gaussian population. **81e:62014**

Jain, G. C. (*with* Khan, Mohd. Saeed) On an exponential family. (German and Russian summaries) **81c:62015**

Janardan, Konanur G. On a generalized Markov-Pólya distribution. **81g:62031**

Johnson, Mark E. (*with* Tietjen, Gary L.; Beckman, Richard J.) A new family of probability distributions with applications to Monte Carlo studies. **81f:62032**

Kabe, D. G. On a property of the exponential distribution. **81j:62042**

Kaufman, Hyman *See* **Rathie, Pushpa N., 81m:62032**

Keating, Jerome P. *See* **Dyer, Danny D., 81f:62030**

Khan, A. H. *See* **Yaqub, M., 81b:62024** *and* **Yaqub, M., 81j:62046**

Khan, Mohd. Saeed *See* **Jain, G. C., 81c:62015**

Kraft, K. H. (*with* Schnieder, E.) Rationale Rechenoperationen mit gammaverteilten Zufallsvariablen. **81j:62043**

Lam, Hing Kam Remarks on the distribution of the sample variance in exponential sampling. **81m:62029**

Lawal, H. Bayo (*with* Upton, Graham J. G.) An approximation to the distribution of the X^2 goodness-of-fit statistic for use with small expectations. **81g:62032**

Lee, P. A. *See* **Ong, S. H., 81i:62032**

Leiner, Bernd Einige Gedanken zur negativen Binomialverteilung. **81m:62030**

Ling, K. D. On distributions of order statistics from discrete distributions. **81g:62033**

Lingappaiah, G. S. (*with* Patel, I. D.) On modified and inflated discrete distribution of general type. **81f:62034**

On the restricted range in the exponential populations. **81a:62014**

Liu, Zhi Min A method of maximum residual for evaluating precision. **81i:62031**

Malik, Henrick J. Exact formula for the cumulative distribution function of the quasirange from the logistic distribution. **81j:62044**

Masood-ul-Haq Order statistics and Fisher's F. **81g:62034**

Mathai, A. M. (*with* Rathie, Pushpa N.) On the nonnull distribution of a test criterion for testing equality of populations. **81e:62015**

Mohanty, Sri Gopal *See* **Handa, B. R., 81e:62013**

Mudholkar, Govind S. (*with* Trivedi, Madhusudan C.) A normal approximation for the distribution of the likelihood ratio statistic in multivariate analysis of variance. **81h:62031**

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62E20 Asymptotic distribution theory

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62E25 Monte Carlo studies

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62E30 Formal computational methods (polykays, etc.)

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62E99 None of the above, but in this section

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62Fxx Parametric inference

secondary classifications:

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62F03 Hypothesis testing

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Sommer, J. Empirische Bayes-Schätzverfahren bei quadratischer Schadensfunktion. (English summary) **(81m:62049)**
Sorenson, H. W. *See* **Upadhyaya, B. R., (81c:93082)**
Susarla, V. (*with* Van Ryzin, John) Addendum to: "Large sample theory for a Bayesian nonparametric survival curve estimator based on censored data" [Ann. Statist. **6** (1978), no. 4, 755–768; MR **58** #3155]. **(81e:62020)**
Targhetta, M. Luisa *See* **Cubeddu, C., (81h:62015)**
Therstappen, Norbert *See* **Flacke, Werner, (81j:62019)**
Tsokos, Chris P. *See* **Koutras, D. C., (81g:62165)**
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Nomachi, Yukio A note on the interval estimation for the mean of normal distribution with known coefficient of variation. **81f:62060**
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Evans, M. (*with* Fraser, Donald Alexander Stuart) An optimum tolerance region for multivariate regression. **(81i:62108)**
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James, A. T. (*with* Venables, W.) Interval estimates for a bivariate principal axis. **(81e:62003)**
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Larntz, Kinley *See* **Fox, Terry; et al., (81i:62114)**
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Statistical robustness: one view of its use in applications today. **81c:62040**
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(Launer, Robert L.) *See* **Robustness in statistics, 81e:62032**
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Moore, Albert H. *See* **Harter, H. Leon; et al., 81b:62045**
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Parzen, Emanuel A density-quantile function perspective on robust estimation. (*See* **81e:62032**)
Pollak, Moshe A class of robust estimators. **81a:62028**
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Schucany, William R. *See* **Parr, William C., 81m:62062**
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Study of robustness by simulation: particularly improvement by adjustment and combination. (*See* **81e:62032**)
de Wet, T. (*with* van Wyk, J. W. J.) Some large sample properties of Hogg's adaptive trimmed means. **81e:62034**
Wilkinson, Graham N. Robust methods—are they sound? (*See* **81f:62003**)
Robust inference—the Fisherian approach. (*See* **81e:62032**)
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Workshop:
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Antoch, Jaromír Robustness of measures of spread. **(81j:62060)**
Berger, Roger L. Gamma minimax robustness of Bayes rules. **(81i:62011)**
Brown, B. M. (*with* Kildea, D. G.) Asymptotically equivalent forms of Hodges-Lehmann-type estimates in regression. **(81f:62064)**
Cressie, Noel *M*-estimation in the presence of unequal scale. **(81i:62067)**
Dalal, S. R. Nonparametric and robust Bayes estimation of location. **(81e:62038)**
Davis, A. W. On the effects of moderate multivariate nonnormality on Wilks's likelihood ratio criterion. **(81i:62090)**
Erlov, A. A. Stable methods of estimating parameters (survey). **(81e:62002)**
Hettmansperger, Thomas P. *See* **Schrader, Ronald M., (81e:62085)**
Hill, Richard W. On estimating the covariance matrix of robust regression *M*-estimates. **(81a:62058)**
Huber, Peter J. Robust smoothing. (*See* **81e:62032)**
Kildea, D. G. *See* **Brown, B. M., (81f:62064)**
Klaassen, Chris A. J. Nonuniformity of the convergence of location estimators. **(81m:62054)**
Kleiner, B. (*with* Martin, R. Douglas; Thomson, D. J.) Robust estimation of power spectra. **(81h:62168)**
Mallows, C. L. Some theory of nonlinear smoothers. **(81j:62183)**
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Melcisko, V. I. Estimates of the solutions of ill-posed stochastic algebraic equations. (Russian) **(81j:60072)**
Muirhead, Robb J. (*with* Waternaux, Christine M.) Asymptotic distributions in canonical correlation analysis and other multivariate procedures for nonnormal populations. **(81g:62089)**
Parzen, Emanuel Density quantile estimation approach to statistical data modelling. **(81f:62068)**
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Šapiro, E. I. Regulating algorithms for estimation of parameters in a linear regression model. (Russian) **(81k:62154)**
Schrader, Ronald M. (*with* Hettmansperger, Thomas P.) Robust analysis of variance based upon a likelihood ratio criterion. **(81e:62085)**
Thall, Peter F. Huber-sense robust *M*-estimation of a scale parameter, with application to the exponential distribution. **(81e:62046)**
Thomson, D. J. *See* **Kleiner, B.; et al., (81h:62168)**
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Waternaux, Christine M. *See* **Muirhead, Robb J., (81g:62089)**

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Davy, Pamela J. Log-linear models. (*See* **81f:62003)**
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Lee, Lung Fei On comparisons of normal and logistic models in the bivariate dichotomous analysis. **81g:62070**
Lwin, T. (*with* Maritz, J. S.) A note on the problem of statistical calibration. **81i:62065**
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Prentice, Ross L. (*with* Pyke, Ronald) Logistic disease incidence models and case-control studies. **81c:62042**
Pyke, Ronald *See* **Prentice, Ross L., 81c:62042**
Sato, Yoshiharu (*with* Sugawa, Kazuaki; Kawaguchi, Michiaki) The geometrical structure of the parameter space of the two-dimensional normal distribution. **81g:62071**
Sugawa, Kazuaki *See* **Sato, Yoshiharu; et al., 81g:62071**
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Bardsley, W. E. Estimating an upper bound to particle size in sediment populations. **(81k:86012)**
Box, George E. P. *See* **Ljung, Greta M., (81h:62161)**
Cox, David Roxbee (*with* Hinkley, David V.) ★Problems and solutions in theoretical statistics. **(81c:62001)**
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Ljung, Greta M. (*with* Box, George E. P.) The likelihood function of stationary autoregressive-moving average models. **(81h:62161)**
Oberhofer, W. Die Nichtkonsistenz der M.-L. Schätzer im "switching regression" problem. **(81g:62122)**
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62Gxx Nonparametric inference

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62G05 Estimation

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Anderson, G. Leigh (*with* de Figueiredo, Rui J. P.) An adaptive orthogonal-series estimator for probability density functions. **81k:62048**
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Campbell, Gregory (*with* Hollander, Myles) Nonparametric Bayes estimation with incomplete Dirichlet prior information. **81e:62036**
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Gill, R. D. Nonparametric estimation based on censored observations of a Markov renewal process. **81h:62074**
Good, I. J. (*with* Gaskins, Raymond A.) Density estimation and bump-hunting by the penalized likelihood method exemplified by scattering and meteorite data. **81g:62073**
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Greblicki, Włodzimierz (*with* Krzyżak, Adam) Asymptotic properties of kernel estimates of a regression function. **81m:62066**
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Prakasa Rao, B. L. S. Nonparametric estimation for continuous time Markov processes via delta-families. **81h:62078**

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Estimation of quantiles in certain nonparametric models. **81e:62043**

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Sabry, Hegazi Sur l'estimation non paramétrique des fonctions de régression. (English summary) **81e:62045**

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Schlee, Walter Nonparametric estimation of curves. **81d:62035**

Schneider, Barbara *See* **Wertz, Wolfgang, 81m:62072**

Scott, David W. (*with* Tapia, R. A.; Thompson, James R.) Nonparametric probability density estimation by discrete maximum penalized-likelihood criteria. **81j:62079**

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Sergeev, V. L. Using estimates of local approximation of probability density. **81b:62054**

Silverman, Bernard W. Density estimation: are theoretical results useful in practice? **81f:62069**

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See also **Good, I. J.; et al., 81g:62073**

Singer, Bernard Distribution-free methods for nonparametric problems: a classified and selected bibliography. **81k:62057**

Spiegelman, Clifford H. (*with* Sacks, J.) Consistent window estimation in nonparametric regression. **81f:62070**

Stefanjuk, A. R. *See* **Vapnik, V. N., 81i:62071**

Stegbuchner, Hans Dichteschätzungen mit Gleichverteilungsmethoden. (English summary) **81f:62071**

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Wolfe, Douglas A. *See* **Fligner, Michael A., 81a:62037**

secondary classifications:

Horn, M. *See* **Kuhnert, D., (81m:62126)**
Kuhnert, D. (*with* Horn, M.) A confidence interval for the unknown value of the regressor with given expectation of the regressand in model I of linear regression. (German summary) **(81m:62126)**
Reiss, R.-D. Optimum confidence bands for density functions. **(81d:62034)**

62G20 Asymptotic efficiency

Aiyar, Radhakrishnan J. (*with* Guillier, Claude L.; Albers, Willem) Asymptotic relative efficiencies of rank tests for trend alternatives. **81a:62038**
Albers, Willem *See* **Aiyar, Radhakrishnan J.; et al., 81a:62038**
Archambault, W. A. T., Jr. (*with* Mikulski, P. W.) On bounds for the asymptotic power and on Pitman efficiencies of the Cramér-von Mises test. (Polish summary) **81h:62084**
Berchtold, H. A modified Mann-Whitney test with improved asymptotic relative efficiency. (German summary) **81a:62039**
Čencov, N. N. On the correctness of a statistical point estimation problem. (Russian. English summary) **81c:62047**
Cressie, Noel An optimal statistic based on higher order gaps. **81c:62048**
Gawronski, Wolfgang (*with* Stadtmüller, Ulrich) On density estimation by means of Poisson's distribution. **81j:62090**
Ghosh, Malay *See* **Sen, Pranab Kumar, 81m:62082**
Goria, M. N. Some locally most powerful generalized rank tests. **81m:62081**
Guillier, Claude L. *See* **Aiyar, Radhakrishnan J.; et al., 81a:62038**
Huang, T'i Yüan (*with* Tsay, Jain Feng) The treatment of ties in some linear rank tests when the underlying distribution is discrete. **81c:62049**
Kochar, Subhash C. Distribution-free comparison of two probability distributions with reference to their hazard rates. **81e:62054**
Kremer, Erhard Approximate and local Bahadur efficiency of linear rank tests in the two-sample problem. **81g:62083**
Mikulski, P. W. *See* **Archambault, W. A. T., Jr., 81h:62084**
Sen, Pranab Kumar The extended two-sample problem: nonparametric case. **81c:62050**
(*with* Ghosh, Malay) On the Pitman efficiency of sequential tests. **81m:62082**
Stadtmüller, Ulrich *See* **Gawronski, Wolfgang, 81j:62090**
Tsay, Jain Feng *See* **Huang, T'i Yüan, 81c:62049**

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Albers, Willem Asymptotic deficiencies of one-sample rank tests under restricted adaptation. **(81m:62074)**
Burridge, P. On the Cliff-Ord test for spatial correlation. **(81f:62116)**
Dwass, Meyer *See* **Govindarajulu, Z., (81j:62083)**
Govindarajulu, Z. (*with* Dwass, Meyer) Simultaneous test for randomness and location of symmetry in one-sample case. **(81j:62083)**
Groeneboom, P. ★Large deviations and asymptotic efficiencies. **(81d:60035)**
(*with* Oosterhoff, J.) ★Bahadur efficiency and small-sample efficiency: a numerical study. **(81d:62021)**
Halperin, Max (*with* Ware, James H.; Wu, Margaret) Conditional distribution-free tests for the two-sample problem in the presence of right censoring. **(81k:62058)**
Has'minskiĭ, R. Z. (*with* Ibragimov, I. A.) On the nonparametric estimation of functionals. **(81j:62076)**
Ibragimov, I. A. *See* **Has'minskiĭ, R. Z., (81j:62076)**
Krauth, J. Generalized sequential ranks and tests of randomness. (French and German summaries) **(81j:62084)**

Oosterhoff, J. *See* **Groeneboom, P., (81d:62021)**
Pliner, V. M. Large deviations of the Kolmogorov, Kuiper and Rényi statistics. (Russian. English summary) **(81i:60027)**
Reiss, R.-D. Estimation of quantiles in certain nonparametric models. **(81e:62043)**
Sen, Pranab Kumar On some distribution-free tests for affine symmetry. **(81g:62079)**
Shirahata, Shingo Rank tests for the k-sample problem with restricted alternatives. **(81k:62060)**
Tamura, Ryoji A test of Wilcoxon type for homogeneity of marginal distributions against ordered alternatives. **(81i:62080)**
Ware, James H. *See* **Halperin, Max; et al., (81k:62058)**
Wu, Margaret *See* **Halperin, Max; et al., (81k:62058)**

62G25 Quick and easy methods

62G30 Order statistics; empirical distribution functions

Alam, S. N. (*with* Yaqub, M.) On order statistics for random geometric sample size. **81i:62084**
Clark, Virginia A. *See* **Tarter, Michael E., 81e:62056**
Cooke, Peter Statistical inference for bounds of random variables. **81f:62082**
Fujito, Isami On the properties of the Kendall distribution. (Japanese. English summary) **81i:62085**
Gardiner, Joseph C. (*with* Sen, Pranab Kumar) Asymptotic normality of a class of time-sequential statistics and applications. (*See* **81i:62141**)
(*with* Sen, Pranab Kumar) Asymptotic normality of a variance estimator of a linear combination of a function of order statistics. **81e:62055**
de Haan, Laurens (*with* Taconis-Haantjes, Elselien) On Bahadur's representation of sample quantiles. **81j:62091**
Joshi, P. C. A note on the moments of order statistics from doubly truncated exponential distribution. **81b:62060**
Lockhart, Richard *See* **Zidek, James V.; et al., 81m:62084**
Madreimov, I. (*with* Petunin, Ju. I.) Some problems on order statistics. (Russian) **81k:62066**
McCabe, George P., Jr. Use of the 27% rule in experimental design. **81g:62084**
McGinley, W. G. A note on dissociatedness and order statistics. **81h:62085**
Muliere, Pietro The rank order distribution of observations drawn from a population with a random distribution function chosen according to a Dirichlet process. (Italian. English and French summaries) **81j:62092**
Navin, Francis P. D. *See* **Zidek, James V.; et al., 81m:62084**
Niederhausen, Heinrich Methoden zur Berechnung exakter Verteilungen vom Kolmogorov-Smirnov-Typ. **81k:62067**
Petunin, Ju. I. *See* **Madreimov, I., 81k:62066**
Sen, Pranab Kumar *See* **Gardiner, Joseph C., 81e:62055** *and* **Gardiner, Joseph C.,** (*See* **81i:62141**)
Sendler, W. On statistical inference in concentration measurement. **81f:62083**
Taconis-Haantjes, Elselien *See* **de Haan, Laurens, 81j:62091**
Tarter, Michael E. (*with* Clark, Virginia A.) Correction to: "Properties of the median and other order statistics of logistic variates" [Ann. Math. Statist. **36** (1965), 1779–1786; MR **32** #1796]. **81e:62056**
Tiago de Oliveira, J. Extreme values and applications. **81f:62084**
Bivariate extremes: foundations and statistics. **81f:62085**
Vogt, Herbert Über eine Variante der empirischen Verteilungsfunktion. (English summary) **81k:62068**
Yaqub, M. *See* **Alam, S. N., 81i:62084**
Yeo, Sung Chil A study on the linear estimation of scale and location parameters by order statistics. (Korean summary) **81m:62083**
Zidek, James V. (*with* Navin, Francis P. D.; Lockhart, Richard) Statistics of extremes: an alternate method with application to bridge design codes. **81m:62084**

secondary classifications:

Ahmad, Ibrahim A. *See* **Lin, Pi Erh; et al., (81f:62033)**
Alam, Khursheed (*with* Wallenius, K. T.) Distribution of a sum of order statistics. **(81c:62011)**
Arnold, Barry C. Recurrence relations between expectations of functions of order statistics. **(81f:62028)**
Chanda, Kamal C. Probabilities of large deviations of sample quantiles. **(81e:60026)**
Chen, Shan Huo *See* **Yanagawa, Takashi, (81m:62020)**
Dziubdziela, Wiesław (*with* Szczotka, Władysław) On weak convergence of order statistics. (Russian summary) **(81c:60023)**
Fu, James C. Large deviation, Bahadur efficiency, and the rate of convergence of linear function of order statistics. **(81i:62038)**
Ghosh, Malay *See* **Sotres, David A., (81f:60038)**
Harrell, Frank E. (*with* Sen, Pranab Kumar) Statistical inference for censored bivariate normal distributions based on induced order statistics. **(81g:62092)**
Hasofer, A. M. Extreme value theory: a review of approaches. **(81d:60044)**
Hebda-Grabowska, Halina (*with* Szynal, Dominik) On the rate of convergence in law for the partial sums of infima of random variables. (Russian summary) **(81e:60018)**
Helmers, R. Edgeworth expansions for trimmed linear combinations of order statistics. **(81f:62040)**
Ibéro, Michel Approximation forte du processus empirique fonctionnel multidimensionnel. (English summary) **(81a:60043)**
Latyšev, K. P. *See* **Zolotuhina, L. A., (81c:60045)**
Lin, Pi Erh (*with* Wu, Ke Tsai; Ahmad, Ibrahim A.) Asymptotic joint distribution of sample quantiles and sample mean with applications. **(81f:62033)**
Ling, K. D. On distributions of order statistics from discrete distributions. **(81g:62033)**
(*with* Tan, C. K.) On inference based on samples with missing observations. **(81g:62062)**
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Some distributional problems connected with order statistics. **(81h:62028)**
Oprian, C. A. A note on the mean of the Nth order statistic of a sample from the exponential distribution. **(81m:62031)**
Renner, R. M. The independence of functions of certain uniform order statistics. **(81b:62021)**
Sen, Pranab Kumar *See* **Harrell, Frank E., (81g:62092)**
Shorack, Galen R. The weighted empirical process of row independent random variables with arbitrary distribution functions. **(81a:60037)**
Sinha, Bikas Kumar On a property of quantile vectors in multivariate samples. (Portuguese) **(81k:60037)**
Sotres, David A. (*with* Ghosh, Malay) On Bahadur's representation of sample quantiles for nonstationary mixing processes. **(81f:60038)**
Szczotka, Władysław *See* **Dziubdziela, Wiesław, (81c:60023)**
Szynal, Dominik *See* **Hebda-Grabowska, Halina, (81e:60018)**
Tan, C. K. *See* **Ling, K. D., (81g:62062)**
Wallenius, K. T. *See* **Alam, Khursheed, (81c:62011)**
Weiss, Lionel The asymptotic sufficiency of sparse order statistics in tests of fit with nuisance parameters. **(81m:62080)**
de Wet, T. (*with* van Wyk, J. W. J.) Some large sample properties of Hogg's adaptive trimmed means. **(81e:62034)**
Wu, Ke Tsai *See* **Lin, Pi Erh; et al., (81f:62033)**
van Wyk, J. W. J. *See* **de Wet, T., (81e:62034)**
Yanagawa, Takashi (*with* Chen, Shan Huo) The MG-procedure in ranked set sampling. **(81m:62020)**
Zolotuhina, L. A. (*with* Latyšev, K. P.) Asymptotic representation of the average number of paired elements in the order statistics of a two-dimensional sample. (Russian. English summary) **(81c:60045)**
van Zwet, W. R. The Edgeworth expansion for linear combinations of uniform order statistics. **(81g:62041)**
A strong law for linear functions of order statistics. **(81j:60043)**

62G99 None of the above, but in this section

Bickel, P. J. (*with* Lehmann, Erich) Descriptive statistics for nonparametric models. IV. Spread. **81h:62086**
Büringer, Helmut (*with* Martin, Herbert; Schriever, Karl-Heinz) ★Nonparametric sequential selection procedures. **81k:62069**
Havránek, Tomáš (*with* Pokorný, Dan) Rank correlation coefficients and orderings on the space of permutations. **81e:62057**
Heathcote, C. R. Bounded influence curve estimation and consistency. (*See* **81f:62003**)
Lehmann, Erich *See* **Bickel, P. J., 81h:62086**
Martin, Herbert *See* **Büringer, Helmut; et al., 81k:62069**
Narayana, T. V. A note on randomisation. (*See* **81h:05003**)
Pokorný, Dan *See* **Havránek, Tomáš, 81e:62057**
Schriever, Karl-Heinz *See* **Büringer, Helmut; et al., 81k:62069**

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Borovskih, Ju. V. (*with* Koroljuk, V. S.) Additive problems of analytic number theory and asymptotics of the distributions of rank statistics. (Russian) **(81e:10039)**
Bosq, Denis Une méthode non paramétrique de prédiction d'un processus stationnaire. Prédiction d'une mesure aléatoire. (English summary) **(81e:62106)**
Friedman, Jerome H. A tree-structured approach to nonparametric multiple regression. **(81f:62117)**
Gupta, Shanti S. (*with* Huang, Deng Yuan; Nagel, Klaus) Locally optimal subset selection procedures based on ranks. **(81e:62023)**
Halász, Gábor Statistical interpolation. **(81j:41004)**
Huang, Deng Yuan *See* **Gupta, Shanti S.; et al., (81e:62023)**
Kazakos, Dimitri Low-order approximations of Markov chains in a decision-theoretic context. **(81a:62052)**
Koroljuk, V. S. *See* **Borovskih, Ju. V., (81e:10039)**
Nagel, Klaus *See* **Gupta, Shanti S.; et al., (81e:62023)**
Pinkava, Ja. Probability distributions in statistical ranking problems. (Russian) **(81m:60030)**
Sen, Pranab Kumar On almost sure linearity theorems for signed rank order statistics. **(81d:60041)**
Voshaar, J. H. Oude ($k-1$)-mean significance levels of nonparametric multiple comparisons procedures. **(81e:62083)**
Walter, S. D. Some generalizations of the committee problem. (French summary) **(81a:05005)**

62Hxx Multivariate analysis [See also 60Exx.]

Gart, John J. The analysis of ratios and cross-product ratios of Poisson variates with application to incidence rates. (*See* **80d:62042**)
Siotani, Minoru Recent topics in multivariate statistical analysis. (Japanese) **81c:62051**

secondary classifications:

Bibby, John M. *See* **Mardia, Kantilal Varichand; et al., (81h:62003)**
Kendall, Maurice ★Multivariate analysis. **(81m:62001)**
Kent, John T. *See* **Mardia, Kantilal Varichand; et al., (81h:62003)**
Khatri, C. G. *See* **Srivastava, Muni Shanker, (81j:62001)**
Mardia, Kantilal Varichand (*with* Kent, John T.; Bibby, John M.) ★Multivariate analysis. **(81h:62003)**
Srivastava, Muni Shanker (*with* Khatri, C. G.) ★An introduction to multivariate statistics. **(81j:62001)**

62H05 Characterization and structure theory

Ahmed, Muhammad Salahuddin *See* **Ameen, Jamal Raoul Mohammad, 81j:62093**

Ameen, Jamal Raoul Mohammad (*with* Ahmed, Muhammad Salahuddin) Two remarks on a paper of E. J. Gumbel: "Multivariate distributions with given margins" [Univ. Lisboa Rev. Fac. Ciênc. A (2) 7 (1959), 179–218; Zbl 91, 145]. (Arabic summary) **81j:62093**

Brucker, J. A note on the bivariate normal distribution. **81b:62061**

Fujita, Keiji The range of correlation coefficients obtainable from $M \times N$ correlation tables with given marginal distributions. I. **81d:62041**

Gourieroux, Christian (*with* Monfort, Alain) On the characterization of a joint probability distribution by conditional distributions. **81i:62086**

(Gumbel, E. J.) *See* **Ameen, Jamal Raoul Mohammad; et al., 81j:62093**

Gyires, B. On a characterization of the generalized multinomial distributions. **81j:62094**

Johnson, Richard A. *See* **Welsly, Thomas E., 81i:62087**

Khatri, C. G. Characterization of some discrete distributions by linear regression. **81k:62087**

Characterization of some multivariate distributions by conditional distributions and linear regression. **81h:62088**

Characterizations of multivariate normality. II. Through linear regressions. **81j:62095**

Lee, Larry Multivariate distributions having Weibull properties. **81k:62070**

Monfort, Alain *See* **Gourieroux, Christian, 81i:62086**

Nalbach-Lenlewska, A. Measures of dependence of the multivariate lognormal distribution. (German and Russian summaries) **81e:62058**

Phillips, Peter C. B. The concentration ellipsoid of a random vector. **81d:62042**

Rogers, G. S. A characterization of a normal intraclass covariance matrix. **81j:62096**

Seshadri, Vanamamalai (*with* Styan, George P. H.) Canonical correlations, rank additivity and characterizations of multivariate normality. **81h:62089**

Styan, George P. H. *See* **Seshadri, Vanamamalai, 81h:62089**

Talwalker, Sheela On characterizing the normal and Poisson distributions. **81h:62090**

Welsly, Thomas E. (*with* Johnson, Richard A.) Bivariate models for dependence of angular observations and a related Markov process. **81i:62087**

secondary classifications:

Chattopadhyay, A. K. *See* **Gupta, Arjun K., (81c:62009)**

Das Gupta, Somesh Brunn-Minkowski inequality and its aftermath. **(81m:26011)**

Fraser, Donald Alexander Stuart (*with* Ng, Kai W.) Multivariate regression analysis with spherical error. **(81i:62115)**

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Hall, Richard L. (*with* Kanter, Marek; Perlman, Michael D.) Inequalities for the probability content of a rotated square and related convolutions. **(81k:60026)**

Kanter, Marek *See* **Hall, Richard L.; et al., (81k:60026)**

Khatri, C. G. A note on an inequality for elliptically contoured distributions. **(81m:60028)**

The necessary and sufficient conditions for dependent quadratic forms to be distributed as multivariate gamma. **(81i:62026)**

Ng, Kai W. *See* **Fraser, Donald Alexander Stuart, (81i:62115)**

Perlman, Michael D. *See* **Hall, Richard L.; et al., (81k:60026)**

62H10 Distribution of statistics

Beckett, James, III (*with* Schucany, William R.; Broffitt, James D.) A special distributional result for bilinear forms. **81i:62088**

Bennett, B. M. A further note on the distribution of generalized coefficients of variation. **81j:62097**

Blaesild, P. Conditioning with conic sections in the two-dimensional normal distribution. **81b:62062**

Broffitt, James D. *See* **Beckett, James, III; et al., 81i:62088**

Carter, E. M. *See* **Srivastava, Muni Shanker, 81i:62095**

Crowther, N. A. S. Approximate distributions for the Box class of likelihood criteria. **81i:62089**

Davis, A. W. On the differential equation for Meijer's $G^{p,0}_{p,p}$ function, and further tables of Wilks's likelihood ratio criterion. **81c:62052**

On the effects of moderate multivariate nonnormality on Wilks's likelihood ratio criterion. **81i:62090**

Further tabulation of Hotelling's generalized T_0^2. **81d:62043**

Don, F. J. Henk The expectation of products of quadratic forms in normal variables. **81c:62053**

Donner, Allan (*with* Koval, John J.) The large sample variance of an intraclass correlation. **81m:62085**

Doss, D. C. Definition and characterization of multivariate negative binomial distribution. **81j:62098**

Dugué, Daniel Applications of characteristic functions in solving some distribution problems. **81k:62071**

Eagleson, G. K. Orthogonal expansions and U-statistics. **81f:62066**

Fujikoshi, Yasunori Erratum: "Asymptotic expansions for the distributions of some functions of the latent roots of matrices in three situations" [J. Multivariate Anal. **8** (1978), no. 1, 63–72; MR **58** #8023]. **81e:62059**

See also **Okamoto, Masashi, 81m:62088**

Goodman, Leo A. On the estimation of parameters in latent structure analysis. **81c:62054**

Haff, L. R. An identity for the Wishart distribution with applications. **81c:62055**

Han, Chien Pai Alternative methods of estimating the likelihood ratio in classification of multivariate normal observations. **81g:62085**

Henze, Fritz H.-H. The exact noncentral distributions of Spearman's r and other related correlation coefficients. **81b:62063**

Hsu, Yu Sheng *See* **Pillai, K. C. S., 81a:62041** *and* **Pillai, K. C. S., 81f:62087**

Jensen, D. R. Bounds on the joint distribution of T_0^2 statistics. **81h:62091**

Kabe, D. G. A remark on a paper by Misra. (German summary) **81j:62099**

Katiyar, R. S. *See* **Mathai, A. M., 81m:62086**

Konishi, Sadanori Asymptotic expansions for the distributions of statistics based on the sample correlation matrix in principal component analysis. **81g:62086**

Koval, John J. *See* **Donner, Allan, 81m:62085**

Koziol, James A. Asymptotic normality of multivariate linear rank statistics under general alternatives. (Czech and Russian summaries) **81g:62087**

Krishnaiah, Paruchuri R. (*with* Lee, Jack C.) On the asymptotic joint distributions of certain functions of the eigenvalues of four random matrices. **81a:62040**

Kushner, H. B. (*with* Meisner, Morris) Eigenfunctions of expected value operators in the Wishart distribution. **81i:62091**

Lee, Jack C. *See* **Krishnaiah, Paruchuri R., 81a:62040**

Lee, Lung Fei On the first and second moments of the truncated multinormal distribution and a simple estimator. **81g:62088**

Mathai, A. M. (*with* Katiyar, R. S.) The distribution and the exact percentage points for Wilks' L_{mvc} criterion. **81m:62086**

Moments of the trace of a noncentral Wishart matrix. **81h:62092**

(*with* Rathie, Pushpa N.) On the nonnull distribution of Wilks' L_{vc} criterion. (French and Italian summaries) **81m:62087**

Meisner, Morris *See* **Kushner, H. B., 81i:62091**

Muirhead, Robb J. (*with* Waternaux, Christine M.) Asymptotic distributions in canonical correlation analysis and other multivariate procedures for nonnormal populations. **81g:62089**

Mukherjee, S. P. A note on the sum of ordered variate densities with its application in reliability theory. **81k:62072**

Nagao, Hisao An asymptotic expansion for the distribution of a function of latent roots of the noncentral Wishart matrix, when $\Omega = O(n)$. **81g:62090**

Nandi, S. B. The exact null distribution of Wilks' criterion. **81k:62073**

Nelson, Peter R. *See* **Ramig, Pauline F., 81k:62075**

Okamoto, Masashi (*with* Fujikoshi, Yasunori) Perturbation of a matrix function and its application to multivariate analysis. **81m:62088**

Olsson, Ulf Maximum likelihood estimation of the polychoric correlation coefficient. **81j:62100**

Perlman, Michael D. Unbiasedness of the likelihood ratio tests for equality of several covariance matrices and equality of several multivariate normal populations. **81i:62092**

Phillips, Peter C. B. The exact distribution of instrumental variable estimators in an equation containing $n+1$ endogenous variables. **81i:62093**

Pillai, K. C. S. (*with* Hsu, Yu Sheng) Exact robustness studies of the test of independence based on four multivariate criteria and their distribution problems under violations. **81a:62041**

(*with* Hsu, Yu Sheng) The distribution of the characteristic roots of $S_1S_2^{-1}$ under violations in the complex case and power comparisons of four tests. **81f:62087**

(*with* Saweris, N. B.) Asymptotic formulae for the percentiles and c.d.f. of Hotelling's trace under violations. (Spanish summary) **81b:62064**

Ramig, Pauline F. (*with* Nelson, Peter R.) The probability integral for a bivariate generalization of the noncentral t. **81k:62075**

Rathie, Pushpa N. *See* **Mathai, A. M., 81m:62087**

Richard, J.-F. (*with* Tompa, H.) On the evaluation of poly-t density functions. **81e:62060**

Samn, Sherwood Ratios of off-diagonal C-Wishart. **81c:62056**

Saw, John G. A family of distributions on the m-sphere and some hypothesis tests. **81g:62091**

Saweris, N. B. *See* **Pillai, K. C. S., 81b:62064**

Schucany, William R. *See* **Beckett, James, III; et al., 81i:62088**

Sibuya, Masaaki Multivariate digamma distribution. **81i:62094**

Srivastava, Muni Shanker (*with* Carter, E. M.) Asymptotic expansions for hypergeometric functions. **81i:62095**

Streit, Franz On the bivariate geometric median. **81i:62096**

Tan, W. Y. On probability distributions from mixtures of multivariate densities. **81i:62097**

Tompa, H. *See* **Richard, J.-F., 81c:62060**

Ullah, Nazakat The correct form of the single-eigenvalue distribution for the nonzero mean-matrix ensembles. **81k:62074**

Wallgren, Cheryl M. The distribution of the product of two correlated t variates. **81m:62089**

Waternaux, Christine M. *See* **Muirhead, Robb J., 81g:62089**

Yassaee, Hedayat On the independence of sample mean and sample variance. **81b:62065**

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Bishop, L. (*with* Fraser, Donald Alexander Stuart; Ng, Kai W.) Some decompositions of spherical distributions. (German, French and Russian summaries) **(81c:62012)**

Chakravarti, S. R. On some tests in MANOVA model with structured covariance matrices. **(81c:62059)**

Cloninger, C. R. *See* **Rice, John; et al., (81h:62181)**

Davis, A. W. Invariant polynomials with two matrix arguments, extending the zonal polynomials. **(81d:33009)**

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Fraser, Donald Alexander Stuart *See* **Bishop, L.; et al., (81c:62012)**

Fujikoshi, Yasunori Asymptotic expansions for the distributions of the sample roots under nonnormality. **(81h:62036)**

Lee, P. A. Probabilistic derivation of a bilinear summation formula for the Meixner-Pollaczek polynomials. **(81m:42022)**

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Mathai, A. M. Some results on functions of matrix argument. **(81f:33017)**

On the nonnull distribution of Wilks' L_{mvc}. **(81j:62103)**

Miles, R. E. *See* **Ruben, Harold, (81g:62040)**

Ng, Kai W. *See* **Bishop, L.; et al., (81c:62012)**
Nishi, Akihiro Generalized Hadamard's inequalities and their applications to statistics. **(81a:15021)**
Reich, T. *See* **Rice, John; et al., (81h:62181)**
Rice, John (*with* Reich, T.; Cloninger, C. R.; Wette, R.) An approximation to the multivariate normal integral: its application to multifactorial qualitative traits. (French summary) **(81h:62181)**
Rizvi, M. Haseeb (*with* Shorrock, R. W.) A note on matrix-convexity. (French summary) **(81b:15024)**
Rotar', V. I. Limit theorems for polylinear forms. **(81m:60039)**
Ruben, Harold The volume of an isotropic random parallelotope. **(81a:60020)**
(*with* Miles, R. E.) A canonical decomposition of the probability measure of sets of isotropic random points in R^n. **(81g:62040)**
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62H12 Estimation

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Berger, James O. Multivariate estimation with nonsymmetric loss functions. **81a:62042**
Dahiya, Ram C. (*with* Korwar, Ramesh M.) Maximum likelihood estimates for a bivariate normal distribution with missing data. **81c:62057**
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Draper, Norman R. (*with* Van Nostrand, R. Craig) Ridge regression and James-Stein estimation: review and comments. **81b:62067**
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Fuller, Wayne A. Properties of some estimators for the errors-in-variables model. **81j:62101**
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Harrell, Frank E. (*with* Sen, Pranab Kumar) Statistical inference for censored bivariate normal distributions based on induced order statistics. **81g:62092**
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62H15 Hypothesis testing

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Browne, M. W. The likelihood ratio test for the equality of correlation matrices. **81b:62070**
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Govindarajulu, Z. (*with* Gore, A. P.) Locally most powerful and other tests for independence in multivariate populations. **81f:62091**
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Correction to: "Asymptotically most powerful rank tests for regression parameters in MANOVA" [Ann. Inst. Statist. Math. **24** (1972), 285–297; MR **48** #7473]. **81e:62063**
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62H20 Measures of association (correlation, canonical correlation, etc.)

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(Fleiss, Joseph L.) *See* **Krippendorff, Klaus, 81k:62078**

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Kowalczyk, Teresa (*with* Kowalski, Adam; Matuszewski, A.; Pleszczyńska, Elżbieta) Applications of monotonic dependence functions: descriptive aspects. (Polish summary) **81m:62100**

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Kowalski, Adam *See* **Ćwik, Jan; et al., 81i:62100** *and* **Kowalczyk, Teresa; et al., 81m:62100**

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Les présentations factorielles de la classification. II. (English summary) **81j:62109b**

Matuszewski, A. *See* **Kowalczyk, Teresa; et al., 81m:62100**

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Sato, Yoshiharu *See* **Yamanoi, Takahiro; et al., 81k:62079**

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Shimbo, Masaru *See* **Yamanoi, Takahiro; et al., 81k:62079**

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Lauwerth, Werner ★Zum Kommunalitätenproblem in der Faktorenanalyse. (German) [On the problem of communality in factor analysis] **(81m:62104)**
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62H25 Factor analysis and principal components

Abraham, Bovas (*with* Ledolter, J.) A note on the multiple indicator-multiple cause model with several latent variables. **81c:62064**
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Bentler, P. M. (*with* Lee, Sik Yum) A statistical development of three-mode factor analysis. **81h:62108**
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Dauxois, Jacques *See* **Arconte, Alain; et al., 81e:62067** *and* **Arconte, Alain; et al., 81j:62110**
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Exploratory data analysis when data are matrices. (French summary) **81m:62103**
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Isogawa, Yoshiko (*with* Okamoto, Masashi) Linear prediction in the factor analysis model. **81k:62081**
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Kroonenberg, Pieter M. (*with* de Leeuw, Jan) Principal component analysis of three-mode data by means of alternating least squares algorithms. **81g:62104**
Kruskal, Joseph B. *See* **Carroll, J. Douglas; et al., 81d:62051**
Krzanowski, W. J. Between-groups comparison of principal components. **81a:62049**
Lauwerth, Werner ★Zum Kommunalitätenproblem in der Faktorenanalyse. (German) [On the problem of communality in factor analysis] **81m:62104**
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Weidman, Lynn Serial arrays and change-over designs. **81j:62156**
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Bhattacharya, C. G. Estimation of a common mean and recovery of interblock information. **(81c:62025)**
Boffey, T. B. (*with* Veevers, A.) On the nonexistence of balanced designs for two-variety competition experiments. **(81m:05019)**
Bush, K. A. Families of Hadamard group divisible designs. **(81k:05015)**
Caliński, Tadeusz (*with* Ceranka, Bronisław; Mejza, Stanisław) On the notion of efficiency of a block design. **(81i:62129)**
Ceranka, Bronisław *See* **Caliński, Tadeusz; et al., (81i:62129)**
Cheng, Ching Shui Orthogonal arrays with variable numbers of symbols. **(81d:05014)**
Duthie, Audrey I. The split hypercubic association scheme. **(81b:05023)**
Freeman, G. H. Complete Latin squares and related experimental designs. **(81m:05032)**
Hartman, Alan A survey of the existence problem for resolvable designs. **(81f:05025)**
Hilton, A. J. W. The reconstruction of Latin squares with applications to school timetabling and to experimental design. **(81j:90066)**
Hwang, F. K. Balanced rectangle designs. **(81i:05046)**
Kageyama, Sanpei Some block structure of certain PBB designs. **(81g:05027)**
Mejza, Stanisław *See* **Caliński, Tadeusz; et al., (81i:62129)**
Misra, B. L. On the construction of PBIB and PBYS designs. **(81m:05026)**
Rokowska, Barbara On resolvable designs. (Polish and Russian summaries) **(81k:05017)**
Saha, G. M. A construction of balanced arrays and some BIB designs therefrom. **(81i:05030)**
Seberry, Jennifer A note on orthogonal Graeco-Latin designs. **(81e:05040)**
A construction for generalized Hadamard matrices. **(81m:05047)**
Sinha, Kishore Balanced bipartite weighing designs with $v=k$. **(81e:05041)**
Šmerling, D. S. Distribution-free rank tests for incomplete blocks with an alternative of a priori ordering. (Russian) **(81k:62062)**
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Wojtas, Mieczysław A note on mutually orthogonal Latin squares. (Polish and Russian summaries) **(81k:05022)**
Zhang, Li Qian The parameter combinations of PBIB(2) designs with $k, r < 10$ for which the problem of existence has not yet been solved. (Chinese. English summary) **(81m:05030)**

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Box, George E. P. (*with* Draper, Norman R.) The variance function of the difference between two estimated responses. **81d:62071**
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Chopra, D. V. On the row complete property of balanced arrays. **81h:62138**
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On main effect plus one plans for 2^m factorials. **81f:62120**
Gupta, Bhisham Chand (*with* Ramirez Carvajal, Santiago S.; Fabris, Maria Angélica) An infinite series of 2^m factorial designs of resolution III plus one. (Portuguese) **81k:62107**
Hunter, William G. *See* **Fries, Arthur, 81m:62144**
Kôno, Kazumasa (*with* Sakaguchi, Kôji) On the orthogonal exact designs for some polynomial responses. **81c:62086**
Konstantelos, Evangelos On responses to the simplex centroid design. **81g:62133**
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Lewis, S. M. The construction of resolution III fractions from generalized cyclic designs. **81d:62073**
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Mukerjee, Rahul Inter-effect-orthogonality in factorial experiments. **81k:62108**
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Sakaguchi, Kôji *See* **Kôno, Kazumasa, 81c:62086**
Shirakura, Teruhiro (*with* Kuwada, Masahide) Covariance matrices of the estimates for balanced fractional 2^m factorial designs of resolution $2l+1$. **81m:62146**
Alias balanced and alias partially balanced fractional 2^m factorial designs of resolution $2l+1$. **81f:62121**
On the norm of alias matrices in balanced fractional 2^m factorial designs of resolution $2l+1$. **81g:62135**
Singh, M. Group divisible second order rotatable designs. **81c:62087**
Smith, J. H. (*with* Lewis, T. O.) Determining the effects of intraclass correlation on factorial experiments. **81j:62157**

secondary classifications:

Ariyaratna, W. M. *See* **Srivastava, Jagdish N., (81c:62084)**
Cheng, Ching Shui Optimality of some weighing and 2^n fractional factorial designs. **(81c:62083)**
Dean, A. M. (*with* Lewis, S. M.) A unified theory for generalized cyclic designs. **(81j:62152)**
Draper, Norman R. (*with* Herzberg, Agnes M.) Designs to guard against outliers in the presence or absence of model bias. (French summary) **(81f:62118)**
Herzberg, Agnes M. *See* **Draper, Norman R., (81f:62118)**
Lewis, S. M. *See* **Dean, A. M., (81j:62152)**
Srivastava, Jagdish N. On the linear independence of sets of 2^q columns of certain $(1,-1)$ matrices with a group structure, and its connection with finite geometries. **(81b:05024)**
(*with* Ariyaratna, W. M.) Theory of optimal balanced 3^m factorial designs. **(81c:62084)**

62K99 None of the above, but in this section

Becker, Niels Models and designs for experiments with mixtures. **81c:62088**
Cvetkov, V. N. ★Математическая теория эксперимента (пассивный эксперимент). (Russian) [Mathematical theory of an experiment (a passive experiment)] **81k:62109**
Eccleston, John A. Recursive techniques for the construction of experimental designs. **81m:62147**
Gleeson, A. C. (*with* McGilchrist, C. A.) An introduction to relationship algebras. **81b:62093**
Goel, B. B. P. S. Systematic designs for experiments with mixtures. **81k:62110**
Holschuh, Norton Randomization and design. I. (*See* **81k:01024**)
John, Peter W. M. Experimental design. (*See* **80f:62002**)
Maljutov, M. B. (*with* Matveev, P. S.) The design of screening experiments with a nonsymmetric response function. (Russian) **81d:62074**
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Matveev, P. S. *See* Maljutov, M. B., 81d:62074
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(Atwood, Corwin L.) *See* Iman, Ronald L.; et al., (81m:65012)
(Beckman, Richard J.) *See* Iman, Ronald L.; et al., (81m:65012)
Collombier, Dominique Un algorithme d'aide à l'analyse des tables de contingence et des plans d'expériences incomplets. (English summary) 81e:62064)
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Iman, Ronald L. (*with* Conover, W. J.) Small sample sensitivity analysis techniques for computer models, with an application to risk assessment. (81m:65012)
Lai, Tze Leung (*with* Robbins, Herbert) Adaptive design and stochastic approximation. (81e:62093)
(Lawrence, William E.) *See* Iman, Ronald L.; et al., (81m:65012)
Lin, Benjamin W. (*with* Rardin, Ronald L.) Controlled experimental design for statistical comparison of integer programming algorithms. (81d:90077)
McCabe, George P., Jr. Use of the 27% rule in experimental design. (81g:62084)
(McKay, M. D.) *See* Iman, Ronald L.; et al., (81m:65012)
Rardin, Ronald L. *See* Lin, Benjamin W., (81d:90077)
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62Lxx Sequential methods

62L05 Sequential design

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Glasebrook, K. D. (*with* Cox, T. F.) On the design of efficient experiments for choosing between two Bernoulli populations. 81d:62075
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secondary classifications:

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Abu-Salih, M. S. A note on a sequential probability ratio test. 81i:62137
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Beier-Küchler, Ingeborg (*with* Semenov, A. T.) Die Waldsche Fundamentalidentität und ein sequentieller Quotiententest für eine zufällige Irrfahrt über einer homogenen irreduziblen Markovschen Kette mit endlichem Zustandsraum. (English and Russian summaries) 81g:62137
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Mann, J. E. A simple sequential criterion for testing a normal mean with unknown variance. 81j:62160
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secondary classifications:

Ahmad, Rashid (*with* Al-Mutair, Munayad A.) The univariate and multivariate k-sample problem: a nonparametric sequential contrast method approach. **(81i:62072)**
Al-Mutair, Munayad A. *See* **Ahmad, Rashid, (81i:62072)**
Bönner, N. (*with* Müller-Funk, U.; Witting, H.) A Chernoff-Savage theorem for correlation rank statistics with applications to sequential testing. **(81f:62073)**
Craiu, Virgil *See* **Mihoc, Gheorghe, (81g:62003)**
Ghosh, Malay *See* **Sen, Pranab Kumar, (81m:62082)**
Kel'bert, M. Ja. Convergence of delay time distribution in two problems of sequential analysis. **(81c:62094)**
Krzyśko, Mirosław Sequential classification. **(81h:62113)**
Mihoc, Gheorghe (*with* Craiu, Virgil) ★Tratat de statistică matematică. Vol. III. (Romanian) [Treatise of mathematical statistics. Vol. III] **(81g:62003)**
Moore, Marc Choix séquentiel des points échantillonnaux pour reconstruire un schéma ordonné. **(81i:62013)**
Müller-Funk, U. *See* **Bönner, N.; et al., (81f:62073)**
Rao, P. V. (*with* Wackerly, D. D.) A large deviation result for the difference in sample medians. **(81m:60043)**
Raoult, Jean-Pierre (*with* Tayar, Abdelhamid) Rangement en contexte alétoire. (English summary) **(81i:62014)**
Sen, Pranab Kumar Time-sequential statistical procedures: a preface. (*See* **81i:62141**) Nonparametric tests for interchangeability under competing risks. **(81j:62086)** (*with* Ghosh, Malay) On the Pitman efficiency of sequential tests. **(81m:62082)**
Simons, Gordon Extensions of the stochastic ordering property of likelihood ratios. **(81m:62008)**
Spurrier, John D. Two stage sign tests that allow first stage acceptance and rejection. (*See* **81i:62141**)
Tayar, Abdelhamid *See* **Raoult, Jean-Pierre, (81i:62014)**
Tong, Y. L. Some new properties of the Bechhofer-Kiefer-Sobel stopping rule. **(81g:62047)**
Wackerly, D. D. *See* **Rao, P. V., (81m:60043)**
Witting, H. *See* **Bönner, N.; et al., (81f:62073)**

62L12 Sequential estimation

Alvo, Mayer (*with* Cabilio, Paul) On the sequential estimation of the probability of success. **81d:62081**
Cabilio, Paul *See* **Alvo, Mayer, 81d:62081**
Campos, Antônio Dorival An extension of the Cramér-Rao inequality for the sequential case. **81j:62164**
Chao, I Fêng Sequential estimation for Poisson trials. **81i:62142**
Franz, Jürgen Consistency and completeness in sequential estimation problems. (German and Russian summaries) **81f:62128**
Magiera, Ryszard Estimation problem for the exponential class of distributions from delayed observations. **81i:62143**
Mukhopadhyay, Nitis Fixed size simultaneous confidence region for mean vector and dispersion of a multinormal distribution. **81j:62165**
Nagao, Hisao (*with* Takada, Michio) On sequential point estimation of the mean of a normal distribution. **81m:62151**
Nomachi, Yukio Some sequential procedures about one-parameter exponential distributions. **81i:62144**
Novic, Bradley Bayes sequential estimation of a Poisson rate: a discrete time approach. **81e:62091**
Sen, Pranab Kumar On time-sequential point estimation of the mean of an exponential distribution. **81d:62082**
Shapiro, C. P. (*with* Wardrop, Robert L.) Dynkin's identity applied to Bayes sequential estimation of a Poisson process rate. **81g:62139** (*with* Wardrop, Robert L.) Simultaneous Bayesian sequential estimation. **81f:62129**
Simons, Gordon Sequential estimators and the Cramér-Rao lower bound. **81j:62166**
Swanepoel, J. W. H. Fixed width sequential confidence interval for the median of a distribution. **81d:62083**
Takada, Michio *See* **Nagao, Hisao, 81m:62151**
Vardi, Yehuda On a stopping time of Starr and its use in estimating the number of transmission sources. **81g:62140**
Wardrop, Robert L. *See* **Shapiro, C. P., 81f:62129** *and* **Shapiro, C. P., 81g:62139**
Zerdy, Gloria C. Risk of asymptotically optimum sequential tests. **81m:62152**

secondary classifications:

Chen, Evan E. (*with* Wardrop, Robert L.) Bayes sequential estimation in a life test and asymptotic properties. **(81j:62070)**
Deheuvels, Paul Estimation séquentielle de la densité. **(81h:62072)**
Ghosh, Malay (*with* Mukhopadhyay, Nitis) Sequential point estimation of the mean when the distribution is unspecified. **(81a:62029)**
James, B. R. (*with* James, K. L.; Pessoa, D.) A "superefficient" procedure for confidence intervals with preassigned length. (Portuguese) **(81m:62059)**
James, K. L. *See* **James, B. R.; et al., (81m:62059)**
Jones, P. W. Bayesian point estimation of the unknown upper limit of a uniform distribution. (German summary) **(81e:62031)**
Mukhopadhyay, Nitis *See* **Ghosh, Malay, (81a:62029)**
Musiela, Marek Admissible and minimax estimation for two classes of stochastic processes. (Russian summary) **(81m:62016)**
Pessoa, D. *See* **James, B. R.; et al., (81m:62059)**
Srinivasan, R. (*with* Wharton, R. M.) Sequential estimation of quantal response curves. **(81k:62145)**
Tamaki, Mitsushi Recognizing both the maximum and the second maximum of a sequence. **(81a:60058)**
Wardrop, Robert L. *See* **Chen, Evan E., (81j:62070)**
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Zieliński, Ryszard Fixed precision estimate of mean of a Gaussian sequence with unknown covariance structure. **(81m:62161)**

62L15 Optimal stopping [See also 60G40.]

Abel, Volker Some essentially complete classes for Bayesian multistage sampling inspection. **81j:62167**
Bartoszyński, Robert (*with* Govindarajulu, Z.) The secretary problem with interview cost. **81m:62153**
Bowerman, Bruce L. (*with* Koehler, Anne B.) An optimal policy for sampling from uncertain distributions. **81i:62145**
Burnašev, M. V. Sequential discrimination of hypotheses with control of observations. (Russian) **81k:62116**
Carroll, Raymond J. Distributions of stopping times for sequential elimination ranking procedures. **81i:62146**
Chen, Wen Chen (*with* Starr, Norman) Optimal stopping in an urn. **81j:62168**
Csenki, Attila On the convergence rate of fixed-width sequential confidence intervals. **81i:62147**
Govindarajulu, Z. Stopping time of a c-sample rank-order sequential probability ratio test. **81a:62085**
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Kel'bert, M. Ja. Convergence of delay time distribution in two problems of sequential analysis. **81c:62094**
Khuri, A. I. *See* **Myers, R. H., 81f:62130**
Koehler, Anne B. *See* **Bowerman, Bruce L., 81i:62145**
Myers, R. H. (*with* Khuri, A. I.) A new procedure for steepest ascent. **81f:62130**
Niewiadomska, Magdalena On the problem of the sequential discrimination. **81g:62141**
Nikolaev, M. L. Construction of the value of a sequential game. (Russian) **81f:62148** Generalized sequential procedures. (Russian. Lithuanian and English summaries) **81b:62097**
Petruccelli, Joseph D. On a best choice problem with partial information. **81m:62154**
Starr, Norman *See* **Chen, Wen Chen, 81j:62168**
Wickwire, Kenneth H. The Poisson disorder problem for large intensities. **81d:62084**
Yamada, Keigo Examples of optimal stopping problems for jump processes. **81d:62085**

secondary classifications:

Bojdecki, Tomasz Probability maximizing approach to optimal stopping and its application to a disorder problem. **(81c:60057)**
Chow, Y. S. (*with* Cuzick, Jack) Moment conditions for the existence and nonexistence of optimal stopping rules for S_n/n^1. **(81c:60058)**
Ciesielski, Z. (*with* Zabczyk, Jerzy) A note on a selection problem. **(81b:60041)**
Cuzick, Jack *See* **Chow, Y. S., (81c:60058)**
Glazebrook, K. D. Stoppable families of alternative bandit processes. **(81c:90088)**
Houston, Alasdair *See* **McNamara, John, (81h:92002)**
Irle, Albrecht On the best choice problem with random population size. (German summary) **(81k:60051)**
McNamara, John (*with* Houston, Alasdair) The application of statistical decision theory to animal behavior. **(81h:92002)**
Sierociński, Andrzej On the optimal choice from a sample drawn from a known distribution. **(81k:60052)**
Weiss, Lionel Some sequential tests reducing the maximum expected sample size. **(81h:62146)**
Zabczyk, Jerzy *See* **Ciesielski, Z., (81b:60041)**
Zerdy, Gloria C. Risk of asymptotically optimum sequential tests. **(81m:62152)**

62L20 Stochastic approximation

Anisimov, V. V. (*with* Anisimova, Z. P.) Convergence of random processes generated by a procedure of the Robbins-Monro type. (Russian) **81d:62086**
Anisimova, Z. P. *See* **Anisimov, V. V., 81d:62086**
Dupač, Václav Asymptotic normality of the continuous Robbins-Monro stochastic approximation procedure. **81d:62087**
Györfi, L. (*with* Györfi, Z.; Vajda, Igor) Bayesian decision with rejection. **81k:62117**
Györfi, Z. *See* **Györfi, L.; et al., 81k:62117**
Heĭsin, V. E. *See* **Katkovnik, V. Ja., 81a:62086**
Herkenrath, Ulrich (*with* Theodorescu, Radu) On a stochastic approximation procedure applied to the bandit problem. (German, Russian and French summaries) **81d:62088**
Isogai, Eiichi On a modified Robbins-Monro procedure approximating the root from below with errors in setting the x-levels. **81e:62092**
Kaniovskaja, I. Ju. A procedure of the stochastic approximation type. (Russian) **81m:62155**
Kaniovskiĭ, Ju. M. (*with* Knopov, P. S.) Asymptotic properties of some stochastic approximation methods. **81i:62149**
Katkovnik, V. Ja. (*with* Heĭsin, V. E.) Dynamic stochastic approximation of polynomial drifts. **81a:62086**
Knopov, P. S. *See* **Kaniovskiĭ, Ju. M., 81i:62149**
Korostelev, A. P. Convergence of recursive stochastic algorithms under Gaussian disturbances. **81i:62150**
Kusano, Shinako Dvoretzky processes in a Banach space and stochastic integral equations. (Japanese) **81c:62095**
Kushner, Harold J. A projected stochastic approximation method for adaptive filters and identifiers. **81i:62151**
Lai, Tze Leung (*with* Robbins, Herbert) Adaptive design and stochastic approximation. **81c:62093** (*with* Robbins, Herbert) Local convergence theorems for adaptive stochastic approximation schemes. **81d:62089**
McLeish, D. L. Variations of the Robbins-Monro procedure for estimating ED(p) in the logit model. **81a:62087**
Mustafaev, È. H. (*with* Nevel'son, M. B.) Asymptotically optimal stochastic

approximation procedure with continuous time. **81j:62169**

Nekrylova, Z. V. Asymptotic behavior of the stochastic quasigradient method. (Russian. English summary) **81i:62152**

Nevel'son, M. B. Convergence of moments in the stochastic approximation method. **81e:62094**

See also **Mustafaev, È. H., 81j:62169**

Obremski, Thomas E. On the choice of starting point in stochastic approximation. **81d:62090**

Pflug, Georg Ch. Stochastic approximation in time series regression. **81h:62147**

Stetige stochastische Approximation. (English summary) **81i:62153**

Price, Edward L. (*with* VandeLinde, V. David) Robust estimation using the Robbins-Monro stochastic approximation algorithm. **81g:62142**

Robbins, Herbert *See* **Lai, Tze Leung, 81d:62089** *and* **Lai, Tze Leung, 81e:62093**

Ruppert, David A new dynamic stochastic approximation procedure. **81a:62088**

Salov, G. I. A stochastic approximation theorem in a Hilbert space and its applications. (Russian. English summary) **81g:62143**

Schmetterer, Leopold From stochastic approximation to the stochastic theory of optimization. **81m:62156**

Theodorescu, Radu *See* **Herkenrath, Ulrich, 81d:62088**

Uosaki, Katsuji Sequential estimation of parameters of autoregressive time series. **81m:62157**

Vajda, Igor *See* **Györfi, L.; et al., 81k:62117**

VandeLinde, V. David *See* **Price, Edward L., 81g:62142**

Watanabe, Masafumi An almost sure convergence theorem in a stochastic approximation method with dependent random variables. **81d:62091**

secondary classifications:

Ahlswede, Rudolf (*with* Wegener, Ingo) ★Suchprobleme. (German) [Search problems] **(81d:94022)**

(Bloh, È. L.) *See* **Construction and analysis of information transmission systems, (81i:94001)**

Borodin, A. N. Some limit theorems for processes with random time. (Russian. English summary) **(81c:60043)**

Eberl, Walther Recursively defined Markov processes (discrete parameter). **(81d:60091)**

Herkenrath, Ulrich (*with* Theodurescu, Radu) On the bandit problem. **(81j:93052)**

Lai, Tze Leung (*with* Robbins, Herbert) Limit theorems for weighted sums and stochastic approximation processes. **(81g:60029)**

Macchi, Odile Résolution adaptative de l'équation de Wiener-Hopf. Cas d'un canal de données affecté de gigue. (English summary) **(81g:93097)**

Robbins, Herbert *See* **Lai, Tze Leung, (81g:60029)**

Solo, V. Some aspects of recursive parameter estimation. **(81j:93057)**

Theodurescu, Radu *See* **Herkenrath, Ulrich, (81j:93052)**

Walk, H. Sequential estimation of the solution of an integral equation in filtering theory. **(81m:60075)**

Wegener, Ingo *See* **Ahlswede, Rudolf, (81d:94022)**

Construction and analysis of information transmission systems ★Построение и анализ систем передачи информации. (Russian) [Construction and analysis of information transmission systems] **(81i:94001)**

Information transmission systems ★Построение и анализ систем передачи информации. (Russian) [Construction and analysis of information transmission systems] **(81i:94001)**

62L99 None of the above, but in this section

secondary classifications:

Büringer, Helmut (*with* Martin, Herbert; Schriever, Karl-Heinz) ★Nonparametric sequential selection procedures. **(81k:62069)**

Cochlar, Jiří The optimum sequential test of a finite number of hypotheses for statistically dependent observations. **(81i:62012)**

Ghosh, J. K. (*with* Mukhopadhyay, Nitis) Sequential procedures in identification. **(81j:62158)**

Martin, Herbert *See* **Büringer, Helmut; et al., (81k:62069)**

Mukhopadhyay, Nitis *See* **Ghosh, J. K., (81j:62158)**

Schriever, Karl-Heinz *See* **Büringer, Helmut; et al., (81k:62069)**

62Mxx Inference from stochastic processes

62M02 Markov processes: hypothesis testing

Akritas, Michael G. (*with* Roussas, George G.) Asymptotic inference in continuous time semi-Markov processes. **81k:62118**

Gilbert, Heinz (*with* Vogel, Jürgen) Über Güteeigenschaften von Tests bei homogenen Markovschen Prozessen. (English and Russian summaries) **81b:62098**

Hsu, Yu Sheng (*with* Park, W. J.) Some statistical inferences on O-U processes. **81c:62096**

Liebetrau, Albert M. Some tests of randomness based upon the variance-time curve of the Poisson process. **81d:62092**

Lin'kov, Ju. M. Probabilities of errors in testing similar hypotheses for diffusion processes. (Russian) **81g:62144**

Asymptotic normality of the logarithm of the likelihood ratio, and hypothesis testing for inhomogeneous Poisson processes. (Russian) **81m:62158**

Park, W. J. *See* **Hsu, Yu Sheng, 81c:62096**

Roussas, George G. *See* **Akritas, Michael G., 81k:62118**

Špilevskiĭ, È. K. Dynamical classification of stochastic processes and systems. **81f:62131**

Vogel, Jürgen *See* **Gilbert, Heinz, 81b:62098**

secondary classifications:

Akritas, Michael G. (*with* Roussas, George G.) Asymptotic expansion of the log-likelihood function based on stopping times defined on a Markov process. **(81a:62016)**

Irie, Albrecht Locally best tests for Gaussian processes. **(81d:62078)**

Kel'bert, M. Ja. Convergence of delay time distribution in two problems of sequential analysis. **(81c:62094)**

Potter, Randall W. *See* **Srivastava, R. C., (81g:62148)**

Roussas, George G. *See* **Akritas, Michael G., (81a:62016)**

Srivastava, R. C. (*with* Potter, Randall W.) Statistical inference for the Galton-Watson branching process. **(81g:62148)**

62M05 Markov processes: estimation

Adachi, Norihiko *See* **Delebecque, François, 81i:62155**

Badalbaev, I. S. (*with* Ibragimov, R.) Statistics of branching processes with two types of particles. (Russian) **81f:62132**

Banon, Gérald (*with* Nguyen, Hung Trung) Sur l'estimation récurrente de la densité et de sa dérivée pour un processus de Markov. (English summary) **81e:62095**

Basawa, Ishwar V. (*with* Brockwell, P. J.) A note on estimation for gamma and stable processes. **81i:62154**

Becker, Niels An estimation procedure for household disease data. **81d:62093**

Bell, C. B. (*with* Ramirez, F.; Smith, Eric) Wiener-Lévy models, spherically exchangeable time series and simultaneous inference in growth curve analysis. **81k:62119**

Brockwell, P. J. *See* **Basawa, Ishwar V., 81i:62154**

Bùi Trọng Liễu Sur l'estimation quasi-optimale. **81m:62159**

Clifford, Peter (*with* Sudbury, Aidan W.) On the use of bounds in the statistical analysis of spatial processes. **81b:62099**

Craiu, Mariana On the method of quasimaximum likelihood for homogeneous systems with complete connections. (Romanian. English summary) **81a:62089**

De Dominicis, Rodolfo Estimation of the transition intensities in a homogeneous Markov process with finitely many states. (Italian. English summary) **81c:62097**

Delebecque, François (*with* Adachi, Norihiko) On some estimation problems arising in environmental and pollution models. **81i:62155**

Demin, N. S. Estimation and classification of random processes on the basis of a set of continuous and discrete observations. **81f:62133**

Doshi, Bharat (*with* Shreve, Steven E.) Strong consistency of a modified maximum likelihood estimator for controlled Markov chains. **81k:62120**

Doukhan, Paul (*with* Ghindès, Marcel) Estimations dans le processus "$X_{n+1} = f(X_n) + \varepsilon_n$". (English summary) **81i:62156**

Duby, Camille (*with* Rouault, Alain) Estimation simultanée de l'espérance et de la variance pour un processus de Galton-Watson. (English summary) **81a:62090**

Feigin, Paul D. (*with* Reiser, Benjamin) On asymptotic ancillarity and inference for Yule and regular nonergodic processes. **81g:62145**

Ghindès, Marcel *See* **Doukhan, Paul, 81i:62156**

Huang, Chün Tsung *See* **Huang, T'i Yüan, 81e:62096**

Huang, T'i Yüan (*with* Huang, Chün Tsung) Maximum likelihood estimate of the age of a Galton-Watson process with Poisson offspring distribution. **81e:62096**

Ibragimov, R. *See* **Badalbaev, I. S., 81f:62132**

Johnson, Richard A. (*with* Susarla, V.; Van Ryzin, John) Bayesian nonparametric estimation for age-dependent branching processes. **81g:62146**

Kulperger, Reg Parametric estimation for a simple branching diffusion process. **81e:62097**

Kutojanc, Ju. A. Intensity parameter estimation of an inhomogeneous Poisson process. (Russian. English summary) **81k:62121**

McDunnough, Philip (*with* Wolfson, David B.) On some sampling schemes for estimating the parameters of a continuous time series. **81k:62122**

(*with* Wolfson, David B.) Fixed versus random sampling of certain continuous parameter processes. **81j:62170**

Mode, Charles J. Nonparametric estimation of functions in a model of competing risks from incomplete longitudinal data. **81g:62147**

Musiela, Marek (*with* Zmyślony, Roman) Estimation for some classes of Gaussian Markov processes. **81j:62171a**

(*with* Zmyślony, Roman) Estimation of regression parameters of Gaussian Markov processes. **81j:62171b**

Nguyen, Hung Trung *See* **Banon, Gérald, 81e:62095**

Potter, Randall W. *See* **Srivastava, R. C., 81g:62148**

Prakasa Rao, B. L. S. The equivalence between (modified) Bayes estimator and maximum likelihood estimator for Markov processes. **81k:62148**

Raftery, Adrian E. Estimation efficace pour un processus autorégressif exponentiel à densité discontinue. (English summary) **81i:62157**

Ramirez, F. *See* **Bell, C. B.; et al., 81k:62119**

Reiser, Benjamin *See* **Feigin, Paul D., 81g:62145**

Rouault, Alain *See* **Duby, Camille, 81a:62090**

Rust, Philip F. Continuous and Poisson-distributed costs accumulated within a stationary Markov process. **81h:62149**

Sclove, Stanley L. The occurrence of fingerprint characteristics as a two-dimensional process. **81b:62100**

Shreve, Steven E. *See* **Doshi, Bharat, 81k:62120**

Smith, Eric *See* **Bell, C. B.; et al., 81k:62119**

Srivastava, R. C. (*with* Potter, Randall W.) Statistical inference for the Galton-Watson branching process. **81g:62148**

Sudbury, Aidan W. *See* **Clifford, Peter, 81b:62099**

Susarla, V. *See* **Johnson, Richard A.; et al., 81g:62146**

Van Ryzin, John *See* **Johnson, Richard A.; et al., 81g:62146**

Wolfson, David B. *See* **McDunnough, Philip, 81j:62170** *and* **McDunnough, Philip, 81k:62122**

Zmyślony, Roman *See* **Musiela, Marek, 81j:62171a** *and* **Musiela, Marek, 81j:62171b**

secondary classifications:

Akritas, Michael G. (*with* Roussas, George G.) Asymptotic inference in continuous time semi-Markov processes. **(81k:62118)**

Beier-Küchler, Ingeborg (*with* Semenov, A. T.) Die Waldsche Fundamentalidentität und ein sequentieller Quotiententest für eine zufällige Irrfahrt über einer homogenen irreduziblen Markovschen Kette mit endlichem Zustandsraum. (English and Russian summaries) **(81g:62137)**

Chtovič, I. I. Control of a diffusion process with unknown drift parameter and small diffusion. (Russian. English summary) **(81a:60087)**

Fernstein, Elżbieta The modified least-squares method of the infinite-dimensional parameter estimation. **(81a:62025)**

Franz, Jürgen Consistency and completeness in sequential estimation problems. (German and Russian summaries) **(81f:62128)**

Gardiner, Joseph C. (*with* Sen, Pranab Kumar) Asymptotic normality of a class of time-sequential statistics and applications. (*See* **81i:62141**)

Gill, R. D. Nonparametric estimation based on censored observations of a Markov renewal process. **(81h:62074)**

Heidelberger, Philip Variance reduction techniques for the simulation of Markov processes. I. Multiple estimates. **(81k:65014)**

Heyde, C. C. On assessing the potential severity of an outbreak of a rare infectious disease: a Bayesian approach. **(81m:60153)**

Hsu, Yu Sheng (*with* Park, W. J.) Some statistical inferences on O-U-processes. **(81c:62096)**

Kabe, D. G. Estimating transition probabilities of singly and doubly stochastic matrices. (German summary) **(81m:62067)**

Keiding, Niels (*with* Lauritzen, Steffen L.) Marginal maximum likelihood estimates and estimation of the offspring mean in a branching process. **(81g:62051)**

Khan, I. A. (*with* Rehman, Sirajur) On estimation of the matrix of the first moments of a two-dimensional branching process. **(81m:60154)**

Lauritzen, Steffen L. *See* **Keiding, Niels, (81g:62051)**

Park, W. J. *See* **Hsu, Yu Sheng, (81c:62096)**

Prakasa Rao, B. L. S. Nonparametric estimation for continuous time Markov processes via delta-families. **(81h:62078)**

Rehman, Sirajur *See* **Khan, I. A., (81m:60154)**

Roussas, George G. *See* **Akritas, Michael G., (81k:62118)**

Semenov, A. T. *See* **Beier-Küchler, Ingeborg, (81g:62137)**

Sen, Pranab Kumar *See* **Gardiner, Joseph C., (*See* 81i:62141)**

62M07 Non-Markovian processes: hypothesis testing

Basawa, Ishwar V. (*with* Prakasa Rao, B. L. S.) Asymptotic inference for stochastic processes. **81k:62123**

Bovett, James M. (*with* Saw, John G.) On comparing two Poisson intensity functions. **81h:62150**

Delecroix, Michel Estimation des densités d'un processus stationnaire à temps continu. (English summary) **81g:62149**

Ingenbleek, J.-F. Un test de bruit blanc multivarié. **81i:62158**

Nelson, Paul I. Least squares tests for discrete parameter stochastic processes. **81f:62134**

Prakasa Rao, B. L. S. *See* **Basawa, Ishwar V., 81k:62123**

Saw, John G. *See* **Bovett, James M., 81h:62150**

secondary classifications:

Baram, Yoram Decomposition and convergence of likelihood ratios. **(81j:62048)**

Siegel, Andrew F. The noncentral chi-squared distribution with zero degrees of freedom and testing for uniformity. **(81e:62017)**

62M09 Non-Markovian processes: estimation

Bad, Monica The asymptotic behaviour of the maximum-likelihood estimate for dependent observations and of the Bayes generalized estimate. **81b:62101**

Gapoškin, V. F. Strong consistency of an estimate of the correlation function of a stationary process in the presence of a trend. (Russian) **81h:62151**

Genys, J. Estimation of a multidimensional parameter of the drift coefficient of a diffusion-type process. (Russian. Lithuanian and English summaries) **81m:62160**

Golubev, G. K. Computation of efficiency of maximum-likelihood estimate when observing a discontinuous signal in white noise. **81j:62172**

(*with* Has'minskiĭ, R. Z.) Estimation in white Gaussian noise by means of a finite number of linear statistics. (Russian. English summary) **81j:62173**

Grečka, G. P. (*with* Zaĭcev, I. I.; Mokljačuk, M. P.; Jadrenko, M. I.) A statistical problem in the error analysis of frequency type detectors. (Russian. English summary) **81k:62124**

Has'minskiĭ, R. Z. *See* **Golubev, G. K., 81j:62173**

Jadrenko, M. I. *See* **Grečka, G. P.; et al., 81k:62124**

Kuricyn, Ju. G. (*with* Tutukov, V. P.) A linear estimate for the mathematical expectation of a random process with a convex correlation function. (Russian. English summary) **81f:62135**

Lánská, Věra Minimum contrast estimation in diffusion processes. **81e:62098**

Ljal'ko, S. B. The efficiency of sample means for fields with a discrete argument. (Russian) **81j:62174**

McDunnough, Philip The estimation of an autocorrelation parameter of a Gaussian vector process. **81c:62098**

Mokljačuk, M. P. *See* **Grečka, G. P.; et al., 81k:62124**

Pearlman, J. G. An algorithm for the exact likelihood of a high-order autoregressive-moving average process. **81g:62150**

Schuh, Hans-Jürgen (*with* Tweedie, Richard L.) Parameter estimation using transform estimation in time-evolving models. **81d:62094**

Shibata, Ritei Asymptotically efficient selection of the order of the model for estimating parameters of a linear process. **81c:62099**

Tutukov, V. P. *See* **Kuricyn, Ju. G., 81f:62135**

Tweedie, Richard L. *See* **Schuh, Hans-Jürgen, 81d:62094**

Zaĭcev, I. I. *See* **Grečka, G. P.; et al., 81k:62124**

Zieliński, Ryszard Fixed precision estimate of mean of a Gaussian sequence with unknown covariance structure. **81m:62161**

secondary classifications:

Akahira, Masafumi On the second order asymptotic optimality of estimators in an autoregressive process. **(81c:62031)**

Cavassilas, Jean-François Contribution à l'étude d'une estimateur de puissance pour une classe importante de processus stochastiques non stationnaires. (English summary) **(81b:94009)**

Has'minskiĭ, R. Z. *See* **Ibragimov, I. A., (81h:62004)**

Ibragimov, I. A. (*with* Has'minskiĭ, R. Z.) ★Асимптотическая теория оценивания. (Russian) [Asymptotic theory of estimation] **(81h:62004)**

Ivanov, O. V. Estimation of a parameter in the correlation function of a stationary process. (Russian) **(81h:62157)**

Ljal'ko, S. B. Sample mean of a homogeneous and isotropic field as a function of observations. (Russian. English summary) **(81h:60071)**

Štulajter, František An optimal property of the best linear unbiased interpolation filter. **(81m:60073)**

62M10 Time series, auto-correlation, regression, etc. [See also 90A20.]

Abraham, Bovas (*with* Box, George E. P.) Bayesian analysis of some outlier problems in time series. **81b:62102**

Intervention analysis and multiple time series. **81h:62152**

Akaike, Hirotugu A Bayesian extension of the minimum AIC procedure of autoregressive model fitting. **81f:62136**

Ali, Mukhtar M. Analysis of stationary spatial-temporal processes: estimation and prediction. **81d:62095**

Anderson, Oliver D. The autocovariance structures associated with general unit circle nonstationarity factors in the autoregressive operators of otherwise stationary ARMA time series models. **81k:62125**

On the partial autocorrelations of once integrated autoregressive-moving average processes. (German and Russian summaries) **81g:62151**

On the bias of sampled autocorrelations. (German and Russian summaries) **81k:62126**

A proof of a relationship between the generalized variances for associated autoregressive and moving average processes. **81i:62160**

The orthogonal decomposition of moving average processes. **81i:62161**

(*with* de Gooijer, J. G.) Distinguishing certain stationary time series models from their nonstationary approximations and improved Box-Jenkins forecasting. **81f:62159**

Serial dependence properties of linear processes. **81m:62162**

Arase, Masahiro *See* **Sakai, Hideaki, 81d:62101**

Basawa, Ishwar V. (*with* Koul, H. L.) Asymptotic tests of composite hypotheses for nonergodic type stochastic processes. **81e:62099**

Battaglia, Francesco Maximization of average coherence in $n \times 1$ linear filters of time series. **81i:62162**

Beach, Charles M. (*with* MacKinnon, James G.) Full maximum likelihood estimation of second-order autoregressive error models. **81b:62103**

Bellach, Joachim Consistency of the least-squares-estimators for linear stochastic difference equations. (German and Russian summaries) **81c:62100**

Bora-Senta, Euthymia (*with* Kounias, Eustratios G.) Parameter estimation and order determination of autoregressive models. **81i:62163**

Box, George E. P. *See* **Abraham, Bovas, 81b:62102** *and* **Ljung, Greta M., 81h:62161**

Bunke, Olaf Model choice for time series. **81i:62164**

Campbell, L. Lorne *See* **Ong, B. G., 81b:62106**

Chang, Tê Hsin A note on sampling from stochastic differential equation model. **81m:62163**

Chatfield, C. Inverse autocorrelations. **81i:62165**

Cleveland, William S. (*with* Devlin, Susan J.) Calendar effects in monthly time series: detection by spectrum analysis and graphical methods. **81k:62127**

Corradi, Corrado (*with* Stefanini, Luciano) Efficient computation of maximum likelihood estimates in ARMA regression models. **81i:62166**

Crowder, Martin J. On the asymptotic properties of least-squares estimators in autoregression. **81k:62128**

Dao, Dan *See* **Griffiths, William E., 81g:62152**

Davies, Neville (*with* Newbold, Paul) Sample moments of the autocorrelations of moving average processes and a modification to Bartlett's asymptotic variance formula. **81j:62175**

Deistler, Manfred The structural identifiability of linear models with autocorrelated errors in the case of cross-equation restrictions. **81b:62104**

See also **Hannan, E. J.; et al., 81m:62167**

Delecroix, Michel Sur l'estimation des densités d'un processus stationnaire à temps continu. (English summary) **81m:62164**

Devlin, Susan J. *See* **Cleveland, William S., 81k:62127**

Dunsmuir, W. T. M. *See* **Hannan, E. J.; et al., 81m:62167**

Durbin, J. The approximate distribution of partial serial correlation coefficients calculated from residuals from regression on Fourier series. **81j:62176**

Džaparidze, K. O. (*with* Marr, G. I.) Estimation of the spectral parameters of a stochastic process on the basis of observations distorted by noise. (Russian) **81c:62101**

de Falguerolles, Antoine Identification et estimation préliminaire des modèles ARMA. **81k:62129**

Forster, Walter Prognose von Zeitreihen mittels linear-rekursiver Funktionen. (English summary) **81i:62167**

Godolphin, E. J. An invariance property for the maximum likelihood estimator of the parameters of a Gaussian moving average process. **81k:62130**

(*with* Stone, J. M.) On the structural representation for polynomial-projecting

predictor models based on the Kalman filter. **81e:62100**

de Gooijer, J. G. *See* **Anderson, Oliver D., 81i:62159**

Govindarajulu, Z. *See* **Gupta, G. D., 81m:62166**

Granger, C. W. J. Long memory relationships and the aggregation of dynamic models. **81m:62165**

Griffiths, William E. (*with* Dao, Dan) A note on a Bayesian estimator in an autocorrelated error model. **81g:62152**

Gupta, G. D. (*with* Govindarajulu, Z.) Nonparametric tests of randomness against autocorrelated normal alternatives. **81m:62166**

Hall, A. D. *See* **Nicholls, D. F., 81d:62099**

Hallin, Marc Invertibility and generalized invertibility of time series models. **81j:62177**

Hannan, E. J. The statistical theory of linear systems. **81e:62101**

A note on autoregressive-moving average identification. **81h:62153**

Recursive estimation based on ARMA models. **81j:62178**

The estimation of the order of an ARMA process. **81j:62179**

(*with* Dunsmuir, W. T. M.; Deistler, Manfred) Estimation of vector ARMAX models. **81m:62167**

Hasza, David P. A note on maximum likelihood estimation for the first-order autoregressive process. **81h:62154**

The asymptotic distribution of the sample autocorrelations for an integrated ARMA process. **81j:62180**

(Haugh, L. D.) *See* **Price, J. Michael, 81j:62186**

Hillmer, Steven C. (*with* Tiao, George C.) Likelihood function of stationary multiple autoregressive moving average models. **81e:62102**

Hosking, J. R. M. The asymptotic distribution of the sample inverse autocorrelations of an autoregressive-moving average process. **81h:62155**

Lagrange multiplier tests of time-series models. **81i:62168**

Huzil, Mitsuaki On an ARIMA model and estimation of parameters for prediction. **81i:62169**

On an autoregressive model fitting and discrete spectra. **81m:62168**

Indjehagopian, J.-P. Les processus stochastiques vectoriels ARMA: une procédure d'identification. **81c:62102**

Ivanov, O. V. A limit theorem for an estimate of a correlation function. (Russian. English summary) **81h:62156**

Estimation of a parameter in the correlation function of a stationary process. (Russian) **81h:62157**

Jacobs, Patricia A. (*with* Lewis, Peter A. W.) Discrete time series generated by mixtures. I. Correlational and runs properties. **81c:62103a**

(*with* Lewis, Peter A. W.) Discrete time series generated by mixtures. II. Asymptotic properties. **81c:62103b**

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Knoke, James D. Normal approximations for serial correlation statistics. (French summary) **81h:62159**

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Lipeika, Antanas Determination of the times of change in the properties of an autoregressive sequence. (Russian. Lithuanian and English summaries) **81j:62182**

Ljung, Greta M. (*with* Box, George E. P.) The likelihood function of stationary autoregressive-moving average models. **81h:62161**

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McLeod, A. Ian Distribution of the residual cross-correlation in univariate ARMA time series models. **81c:62104**

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Ong, B. G. (*with* Campbell, L. Lorne) Estimation of frequencies of sinusoids in the presence of noise. (French summary) **81b:62106**

Palm, Franz (*with* Zellner, Arnold) Large sample estimation and testing procedures for dynamic equation systems. **81g:62156**

Parzen, Emanuel (*with* Newton, H. J.) Multiple time series modeling. II. **81i:62171**

Pesaran, M. H. (*with* Slater, L. J.) ★Dynamic regression: theory and algorithms. **81j:62184**

Pham Dinh Tuan The estimation of parameters for autoregressive-moving average models from sample autocovariances. **81g:62157**

(*with* Tran, Lanh Tat) Quelques résultats sur les modèles bilinéaires de séries chronologiques. (English summary) **81a:62092**

Phillips, Peter C. B. The sampling distribution of forecasts from a first-order autoregression. **81i:62172**

Pierce, David A. R^2 measures for time series. **81d:62100**

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Poskitt, D. S. (*with* Tremayne, A. R.) Testing the specification of a fitted autoregressive-moving average model. **81j:62185**

Poznjak, A. S. Estimating the parameters of autoregression processes by the method of least squares. **81i:62173**

Price, J. Michael The characterization of instantaneous causality. Correction to: "Causality in temporal systems: characterizations and a survey" [J. Econometrics 5 (1977), no. 3, 265–293; MR 56 #1631] by D. A. Pierce and L. D. Haugh. **81j:62186**

Quinn, B. G. Limiting behaviour of autocorrelation function of ARMA process as several roots of characteristic equation approach unit circle. **81h:62163**

Order determination for a multivariate autoregression. **81m:62173**

Revankar, Nagesh S. Analysis of regressions containing serially correlated and serially uncorrelated error components. **81h:62164**

Risager, Folmer Simple correlated autoregressive processes. **81j:62187**

Robinson, P. M. Distributed lag approximation to linear time-invariant systems. **81k:62132**

Sakai, Hideaki (*with* Arase, Masahiro) Recursive parameter estimation of an autoregressive process disturbed by white noise. **81d:62101**

Šalteuytė, V. Estimation of the parameters of an autoregressive sequence measured in the presence of additive noise. (Russian. Lithuanian and English summaries) **81j:62188**

Sargan, J. D. Some tests of dynamic specification for a single equation. **81g:62158**

Sawa, Takamitsu The exact moments of the least squares estimator for the autoregressive model. **81c:62105**

Singh, T. R. P. Analytical studies on some statistical properties of mean values and their applications to sampling in one dimension. **81a:62093**

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Troutman, Brent M. Some results in periodic autoregression. **81d:62102**

Tubbs, J. D. The effect of serial correlation on confidence regions for the parameters of a multivariate normal population. **81h:62165**

Wahba, Grace Parameter estimation in linear dynamic systems. **81g:62159**

Wei, William W. S. The effect of temporal aggregation on parameter estimation in distributed lag model. **81b:62107**

Yamamoto, Taku On the treatment of autocorrelated errors in the multiperiod prediction of dynamic simultaneous equation models. **81m:62174**

Zaremba, S. K. Polynomial trends in time series. (French and German summaries) **81k:62133**

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Akinfiev, G. A. (*with* Leonenko, M. M.) Strong law of large numbers for weighted random variables and its application to recurrent optimization procedures. **(81m:60054)**

(Anderson, Oliver D.) *See* **Time series, (81k:62006)**

Bellach, Joachim Bemerkungen zu einer allgemeinen Definition rekursiver Schätzungen mit Anwendungsbeispielen. (English and Russian summaries) **(81e:62072)**

Damsleth, Elvind Interpolating missing values in a time series. **(81f:62141)**

Davis, William W. Robust methods for detection of shifts of the innovation variance of a time series. **(81i:62061)**

Fortet, R. Suites, en particulier stationnaires de vecteurs aléatoires d'ordre 2. (English summary) **(81i:60036)**

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Gaposkin, V. F. Strong consistency of an estimate of the correlation function of a stationary process in the presence of a trend. (Russian) **(81h:62151)**

Gorelik, N. A. (*with* Frenkel', A. A.) New directions in the analysis and prediction of time series. (Russian) **(81i:90052)**

Grandell, Jan (*with* Hamrud, Mats; Toll, Peter) A remark on the correspondence between the maximum entropy method and the autoregressive model. **(81k:94016)**

Hamrud, Mats *See* **Grandell, Jan; et al., (81k:94016)**

Hultema, Bradley E. An analysis of covariance Markov model for interrupted time series

experiments. (*See* **81c:62081**)
Johnson, Richard A. *See* **Wehrly, Thomas E., (81i:62087)**
Jones, Roger G. Best linear unbiased estimators for repeated surveys. **(81i:62021)**
Kiviet, Jan F. Effects of ARMA errors on tests for regression coefficients: comments on Vinod's article; improved and additional results. **(81j:62123)**
Lawrance, A. J. The mixed exponential solution to the first-order autoregressive model. **(81j:60065)**
(*with* Lewis, Peter A. W.) The exponential autoregressive-moving average EARMA(p, q) process. **(81i:60053)**
Leonenko, M. M. *See* **Akinfiev, G. A., (81m:60054)**
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McDunnough, Phillip (*with* Wolfson, David B.) On some sampling schemes for estimating the parameters of a continuous time series. **(81k:62122)**
McGiffin, P. B. (*with* Murthy, D. N. P.) Parameter estimation for autoregressive systems with missing observations. **(81k:93065)**
Murthy, D. N. P. *See* **McGiffin, P. B., (81k:93065)**
Nagai, Takeaki On finite parametric linear models of dyadic stationary processes. **(81m:60060)**
Ozaki, T. Nonlinear time series models for nonlinear random vibrations. **(81c:70021)**
Pflug, Georg Ch. Stochastic approximation in time series regression. **(81h:62147)**
Pierce, David A. A survey of recent developments in seasonal adjustment. **(81f:90035)**
Rissanen, Jorma Shortest data description and consistency of order estimates in ARMA-processes. **(81f:93070)**
Sen, Pranab Kumar Time-sequential statistical procedures: a preface. (*See* **81i:62141**)
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Sugihara, Souichi Statistical estimation of the nonlinear regression model with autoregressive errors. **(81i:62111)**
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Nottingham ★Time series. **(81k:62006)**
Time series ★Time series. **(81k:62006)**

62M15 Spectral analysis of time series

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Cameron, M. A. (*with* Hannan, E. J.) Transient signals. **81h:62167**
Cuzick, Jack (*with* Lindgren, Georg) Frequency estimation from crossings of an unknown level. **81f:62138**
Farrell, R. H. Asymptotic lower bounds for the risk of estimators of the value of a spectral density function. **81g:62161**
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Hebbel, Hartmut (*with* Heiler, Siegfried) Die Verwendung von Spline-Funktionen bei der Schätzung von Spektraldichten. (*See* **81e:62105**)
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Hinich, Melvin J. Estimating the lag structure of a nonlinear time series model. **81a:62094**
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Kleiner, B. (*with* Martin, R. Douglas; Thomson, D. J.) Robust estimation of power spectra. **81h:62168**
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Robinson, P. M. Time series modeling and estimation over frequency bands. **81k:62135**
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Shore, Robert W. A Bayesian approach to the spectral analysis of stationary time series. **81i:62174**
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Walter, Gilbert G. A class of spectral density estimators. **81k:62136**
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(*with* Truš, N. N.) An estimate of the spectral densities of stationary processes. (Russian. Lithuanian and English summaries) **81c:62107**
(*with* Isakova, G. A.) Gaussian smoothing of statistics for the spectral density of a homogeneous random field. (Russian. English summary) **81m:62176**

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Statistics ★Splinefunktionen in der Statistik. (German) [Spline functions in statistics] **81e:62105**

secondary classifications:

Begiašvili, G. A. (*with* Revišvili, L. V.) A numerical method for regularized estimation of the spectral density by means of cubic splines. (Russian. Georgian and English summaries) **(81c:65068)**
Cadzow, James A. High performance spectral estimation—a new ARMA method. **(81h:94001)**
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Kohn, R. On the spectral decomposition of stationary time series using Walsh functions. I. **(81h:60045a)**
On the spectral decomposition of stationary time series using Walsh functions. II. **(81h:60045b)**
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Mihailov, G. A. Numerical construction of a random field with a given spectral density. (Russian) **(81f:65007)**
Morettin, P. A. Homogeneous random processes on locally compact abelian groups. **(81h:60046)**
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Roberts, J. B. (*with* Gaster, M.) On the estimation of spectra from randomly sampled signals: a method of reducing variability. **(81d:94021)**
Tsokos, Chris P. *See* **Jernigan, Robert W.; et al., (81d:92021)**
Turner, John C. *See* **Jernigan, Robert W.; et al., (81d:92021)**
Yuen, C. K. (*with* Fraser, Donald Alexander Stuart) ★Digital spectral analysis. **(81k:94001)**

62M20 Prediction [See also 60G25.]; filtering [See also 60G35, 93E10, 93E11.]

Anděl, Jiří On interpolation of multiple autoregressive processes. **81h:62169**
Baillie, Richard T. Asymptotic prediction mean squared error for vector autoregressive models. **81b:62109**
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Bonet, E. (*with* Nualart Rodón, David) Interpolation and forecasting in Poisson's processes. **81f:62140**
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Eby, L. Marlin Prediction of autoregressive multivariate time series with an application to certain models of spatial time series. **81i:62175**
Fuller, Wayne A. (*with* Hasza, David P.) Predictors for the first-order autoregressive process. **81m:62177**
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Thrum, R. Linear estimation and prediction in stochastic processes. **81m:62178**
Tiao, George C. (*with* Hillmer, Steven C.) Some consideration of decomposition of a time series. **81a:62097**
Velleman, Paul F. Definition and comparison of robust nonlinear data smoothing algorithms. **81m:62179**
Yajima, Yoshihiro On prediction of integrated moving average processes. **81f:62142**

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Anderson, Oliver D. (*with* de Gooijer, J. G.) Distinguishing certain stationary time series models from their nonstationary approximations and improved Box-Jenkins forecasting. **(81i:62159)**
Goodwin, Graham C. *See* **Kabaila, Paul V., (81b:93068)**
de Gooijer, J. G. *See* **Anderson, Oliver D., (81i:62159)**
Huzii, Mitsuki On an ARIMA model and estimation of parameters for prediction. **(81i:62169)**
Kabaila, Paul V. (*with* Goodwin, Graham C.) On the estimation of the parameter of an optimal interpolator when the class of interpolators is restricted. **(81b:93068)**
Kushner, Harold J. A robust discrete state approximation to the optimal nonlinear filter for a diffusion. **(81b:60039)**
Landers, D. (*with* Rogge, L.) Best approximants in L_Φ-spaces. **(81c:41042)**
Lindgren, Georg Model processes in nonlinear prediction with application to detection and alarm. **(81m:60070)**
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Miamee, A. G. (*with* Salehi, H.) On the prediction of periodically correlated stochastic processes. **(81c:60054)**
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Ogata, Yoshihiko Maximum likelihood estimates of incorrect Markov models for time series and the derivation of AIC. **(81f:62137)**
Pardoux, E. Stochastic partial differential equations and filtering of diffusion processes. **(81b:60059)**
Porter, William A. Multiple signal extraction by polynomial filtering. **(81m:94006)**
Rogge, L. *See* **Landers, D., (81c:41042)**
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Sackrowitz, Harold The influence of the nonrecent past in prediction for stochastic processes. **(81f:60060)**
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Shepp, L. A. (*with* Slepian, D.; Wyner, Aaron D.) On prediction of moving-average processes. **(81g:60041)**
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Smith, J. Q. A generalization of the Bayesian steady forecasting model. **(81d:62031)**
Sweet, Arnold L. An ad hoc method for forecasting series with zero values. **(81d:90034)**
Szpirglas, Jacques (*with* Mazziotto, Gérald) Modèle général de filtrage non linéaire et équations différentielles stochastiques associées. **(81c:60056)**
Tantu, J. T. A self-tuning predictor for a class of multivariable stochastic processes. **(81g:93101)**
Wyner, Aaron D. *See* **Shepp, L. A.; et al., (81g:60041)**

62M99 None of the above, but in this section

Brillinger, David R. Analyzing point processes subjected to random deletions. (French summary) **81b:62110**
Diggle, Peter J. (*with* Matérn, Bertil) On sampling designs for the study of point-event nearest neighbour distributions in $\mathbf{R}^2$. **81h:62170**
Liu, Lon Mu (*with* Tiao, George C.) Parameter estimation in dynamic models. **81h:62171**
Matérn, Bertil *See* **Diggle, Peter J., 81h:62170**
McDunnough, Phillip Estimating an interaction parameter of an infinite particle system. **81f:62143**
Slobodčikova, L. V. Estimation of expansion coefficients of a stationary random field on the basis of a system of Haar functions. **81a:62098**
Tiao, George C. *See* **Liu, Lon Mu, 81h:62171**

secondary classifications:

Craven, Peter (*with* Wahba, Grace) Smoothing noisy data with spline functions. Estimating the correct degree of smoothing by the method of generalized cross-validation. **(81g:65018)**
Goodwin, Graham C. *See* **Zarrop, Martin B.; et al., (81a:62079)**
Kazakos, Dimitri On resolution and exponential discrimination between Gaussian stationary vector processes and dynamic models. **(81f:93066)**
Martin, R. J. A subclass of lattice processes applied to a problem in planar sampling. **(81g:62017)**
Pandit, Sudhakar M. Data dependent systems and exponential smoothing. **(81g:93098)**
Payne, R. L. *See* **Zarrop, Martin B.; et al., (81a:62079)**
Sanderson, Arthur C. *See* **Segen, Jakub, (81c:94009)**
Schagen, I. P. The use of stochastic processes in interpolation and approximation. **(81a:65018)**
Segen, Jakub (*with* Sanderson, Arthur C.) Detecting change in a time-series. **(81c:94009)**
Šlipienytė, D. Recurrence algorithms of statistical criterion for nonstationary detection of system with correlated noise. (Russian. Lithuanian and Russian summaries) **(81k:93067)**
Spruill, Carl (*with* Studden, W. J.) A Kiefer-Wolfowitz theorem in a stochastic process setting. **(81a:62078)**
Stoyan, Dietrich Applied stochastic geometry: a survey (invited paper). (German and Russian summaries) **(81h:60020)**
Studden, W. J. *See* **Spruill, Carl, (81a:62078)**
Wahba, Grace *See* **Craven, Peter, (81g:65018)**
Zarrop, Martin B. (*with* Payne, R. L.; Goodwin, Graham C.) Experiment design for time series analysis: the multivariate case. **(81a:62079)**

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62N05 Reliability and life testing [See also 90B25.]

Bain, Lee J. ★Statistical analysis of reliability and life-testing models. **81f:62144**
(*with* Engelhardt, Max) Inferences on the parameters and current system reliability for a time truncated Weibull process. **81h:62172**
Ball, Clifford A. *See* **Shaked, Moshe; et al., 81d:62107**
Barton, Russell R. (*with* Turnbull, Bruce W.) A survey of covariance models for censored life data with an application to recidivism analysis. (*See* **81e:62081**)
Basu, A. P. (*with* Ghosh, J. K.) Identifiability of distributions under competing risks and complementary risks model. **81i:62177**
Bergman, Bo On age replacement and the total time on test concept. **81f:62145**
Billikam, J. Edward Generalized life distribution parameterization and estimation. **81k:62138**
Boardman, Thomas J. (*with* Colvert, Robert E.) Estimation in the piecewise constant hazard rate model—when the data are grouped. **81e:62107**
Breslow, Norman The proportional hazards model: applications in epidemiology. (*See* **81i:62141**)
Colvert, Robert E. *See* **Boardman, Thomas J., 81e:62107**
Davis, Henry T. (*with* Feldstein, Michael L.) The generalized Pareto law as a model for progressively censored survival data. **81g:62163**
DeGroot, Morris H. (*with* Goel, Prem K.) Bayesian estimation and optimal designs in partially accelerated life-testing. **81e:62108**
El-Newehi, Emad Extensions of a simple model with applications in reliability, extinction of species, inventory depletion and urn sampling. **81i:62178**
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Fertig, K. W. (*with* Meyer, M. Eugene; Mann, Nancy R.) On constructing prediction intervals for samples from a Weibull or extreme value distribution. **81k:62139**
Földes, Antónia (*with* Rejtő, L.; Winter, B. B.) Strong consistency properties of nonparametric estimators for randomly censored data. The product-limit estimator, estimation of density and failure rate. **81g:62164**
Friedman, Lea (*with* Gertsbach, I. B.) Maximum likelihood estimation in a minimum-type model with exponential and Weibull failure modes. **81h:62173**
Gajjar, A. V. *See* **Patel, I. D., 81h:62175**
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Cocchi, Daniela A reliability model with finite domain and its application to the survival analysis of residual platelets. (Italian. English and French summaries) **81k:92008**
Elandt-Johnson, Regina C. (*with* Johnson, Norman Lloyd) ★Survival models and data analysis. **81j:62195**
El-Neweihi, Emad (*with* Govindarajulu, Z.) Characterizations of geometric distribution and discrete IFR (DFR) distributions using order statistics. **81a:62012**
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Hasimov, Š. A. A quadratic measure of deviation of a nonparametric estimate of a failure hazard function. (Russian) **81g:62074**
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Jewell, William S. Bayesians learn while waiting. **81k:62042**
Johnson, Norman Lloyd *See* **Grosswald, Emil; et al., 81h:62025** *and* **Elandt-Johnson, Regina C., 81j:62195**
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Lee, S. C. S. (*with* Locke, Charles; Spurrier, John D.) On a class of tests of exponentiality. **81m:62077**
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Some predictive distributions from a future sample based on earlier samples. **81h:62039**
Bayesian approach to the estimation of reliability from complete and censored samples in the exponential population. **81h:62040**
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Schmidt, H. Ein optimaler Test für den Parameter der Exponentialverteilung und andere Lebensdauerverteilungen. **81h:62046**
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Chiu, W. K. (*with* Leung, M. P. Y.) A new Bayesian approach to quality control charts. **81m:62184**
von Collani, E. Kostenoptimale Prüfpläne bei laufender Kontrolle eines normalverteilten Merkmals. **81j:62190**
Esser, E. (*with* Sturhahn, J.) Berechnung wirtschaftlicher Stichprobenpläne für messende Prüfung bei exponentieller Schadensfunktion durch ein Näherungsverfahren. **81i:62182**
Hamerle, Alfred (*with* Kemény, P.) Zur Bestimmung von Bayes-Lösungen bei messender Prüfung. (English and Russian summaries) **81a:62101**
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Balakrishnan, A. V. On quickest detection of system structure variation. **81i:93029**
Berţi, Ştefan N. Méthodes de l'arithmétique des intervalles, appliquées au contrôle statistique de la qualité. **81h:65044**
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62N99 None of the above, but in this section

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62Pxx Applications [See also 82–XX, 90–XX, 92–XX.]

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Andersen, Erling B. ★Discrete statistical models with social science applications. **(81b:62006)**

62P05 Actuarial mathematics

Beekman, John A. (*with* Fuelling, Clinton P.) Refined distributions for a multirisk stochastic process. **81f:62151**
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Albrecht, Peter On the correct use of the chi-square goodness-of-fit test. **(81m:62038)**
Borch, Karl Product liability, quality control and insurance. **(81d:90049)**
Hennessey, John C. An age-dependent, absorbing semi-Markov model of work histories of the disabled. **(81i:90057)**
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Lemaire, J. Reinsurance as a cooperative game. **(81d:90116)**
Loistl, O. (*with* Rosenthal, H.) Risikominimierung bei der Portfolioplanung unter besonderer Berücksichtigung singulärer Kovarianzmatrizen. (English summary) **(81d:90013)**
Peccati, Lorenzo On the internal rate of return of random financial operations. (Italian. English summary) **(81d:90015)**
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Conference:
Actuarial Research, Computational Probability ★Computational probability. **(81k:60005)**
Probability ★Computational probability. **(81k:60005)**
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62P10 Biometrics

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Elandt-Johnson, Regina C. (*with* Johnson, Norman Lloyd) ★Survival models and data analysis. **81j:62195**
Some prior and posterior distributions in survival analysis: a critical insight on relationships derived from cross-sectional data. **81j:62196**
Farewell, V. T. (*with* Prentice, Ross L.) The approximation of partial likelihood with emphasis on case-control studies. **81i:62185**
Gani, J. The analysis of some biological data. (*See* **80d:62042**)
Gleeson, A. C. (*with* McGilchrist, C. A.) Estimation of interplant dependence in a linear planting scheme. **81j:62197**
Gupta, Ramesh C. Some counterexamples in the competing risk analysis. **81g:62175**
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O'Neill, Terence J. Distribution-free estimation of cure time. **81g:62176**
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Reed, George F. (*with* McHugh, Richard B.) The estimation of dental caries incidence in the presence of diagnostic error. **81c:62110**
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Schoenfelder, C. A. (*with* Hoel, D. G.) Properties of the Neyman-Scott carcinogenesis model at low dose rates. **81g:62177**
Smith, A. F. M. (*with* Cook, D. G.) Straight lines with a change-point: a Bayesian analysis of some renal transplant data. **81m:62189**
Smith, Cedric A. B. Further remarks on estimating genetic correlations. **81m:62190**
Srinivasan, R. (*with* Wharton, R. M.) Sequential estimation of quantal response curves. **81k:62145**
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Amemiya, Takeshi The n^{-2}-order mean squared errors of the maximum likelihood and the minimum logit chi-square estimator. **(81e:62030)**
Anderson, David R. (*with* Burnham, K. P.; Crain, B. R.) Some comments on Anderson and Pospahala's correction of bias in line transect sampling. **(81m:92050)**
Andrich, David A model for contingency tables having an ordered response classification. **(81a:62045)**
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Basu, A. P. (*with* Ghosh, J. K.) Identifiability of distributions under competing risks and complementary risks model. **(81i:62177)**
Battaglia, Francesco (*with* Orsingher, Enzo) A doubly stochastic Poisson model of randomly spreading planar regions. (Italian. English and French summaries) **(81g:60103)**
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Breslow, Norman The proportional hazards model: applications in epidemiology. (*See* **81i:62141**)
Bulmer, Michael George ★The mathematical theory of quantitative genetics. **(81m:92030)**
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Conference:
Analytical and Numerical Approaches to Asymptotic Problems in Analysis ★Analytical and numerical approaches to asymptotic problems in analysis. **81m:65005**
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★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] **81a:65010**
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(Andersson, Robert S.) *See* **Application and numerical solution of integral equations. (81f:45001)**
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Constructive theory of functions and functional analysis ★Конструктивная теория функций и функциональный анализ. Вып. 2. (Russian) [Constructive theory of functions and functional analysis. No. 2] **(81j:46002)**
Cubature formulas ★Теория кубатурных формул и приложения функционального анализа к задачам математической физики. (Russian) [Theory of cubature formulas and the application of functional analysis to problems of mathematical physics] **(81f:35006)**
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Hänggi, P. (*with* Roesel, F.; Trautmann, D.) Evaluation of infinite series by use of continued fraction expansions: a numerical study. 81k:65006
Mann, W. Robert Averaging to improve convergence of iterative processes. 81i:65005
Roesel, F. *See* Hänggi, P.; et al., 81k:65006
Sidi, Avram Convergence properties of some nonlinear sequence transformations. 81h:65003
Trautmann, D. *See* Hänggi, P.; et al., 81k:65006

secondary classifications:

Guk, V. M. (*with* Novikov, L. A.) Regularization of integrals with power singularities of fractional order. (Russian) (81i:65022)
Novikov, L. A. *See* Guk, V. M., (81i:65022)
Philip, J. R. The convergence and partial convergence of alternating series. (81h:40004)
Scharlau, Winfried Einige Betrachtungen zur Leibnizschen Reihe. (81m:40001)

65B15 Euler-Maclaurin formula

Minoli, Daniel Inductive formulae for general sum operations. 81g:65002

65B20 Poisson formula, etc.

65B99 None of the above, but in this section

Cordellier, F. Sur la régularité des procédés δ^2 d'Aitken et W de Lubkin. 81d:65005
Delahaye, Jean-Paul Liens entre la suite du rapport des erreurs et celle du rapport des différences. (English summary) 81e:65003
Algorithmes pour suites non convergentes. (English summary) 81f:65005
(*with* Germain-Bonne, B.) Résultats négatifs en accélération de la convergence. (English summary) 81k:65007
Germain-Bonne, B. Ensembles de suites et de procédés liés pour l'accélération de la convergence. 81d:65006
See also Delahaye, Jean-Paul, 81k:65007
Glušik, M. M. *See* Gnativ, B. V., 81i:65006
Gnativ, B. V. (*with* Glušik, M. M.) Nonlinear formulas of analysis based on Shanks transformation. (Russian) 81i:65006
Niethammer, Wilhelm Numerical application of Euler's series transformation and its generalizations. 81g:65003

secondary classifications:

Adonc, G. T. (*with* Agekjan, L. G.) Acceleration of iteration in computations of steady states according to Newton's method. (Russian. Armenian summary) (81i:65102)
Agekjan, L. G. *See* Adonc, G. T., (81i:65102)
Chang, Y. F. (*with* Corliss, George F.) Ratio-like and recurrence relation tests for convergence of series. (81i:40004)
Corliss, George F. *See* Chang, Y. F., (81i:40004)
Sidi, Avram Extrapolation methods for oscillatory infinite integrals. (81m:40002)
Stynes, Martin On faster convergence of the bisection method for all triangles. (81j:51023)

65Cxx Numerical simulation {For theoretical aspects, see 68Jxx.}

secondary classifications:

Dreĭzin, Ju. A. (*with* Myŝeckaja, E. E.; Sosnin, N. V.; Favorskiĭ, A. P.) Numerical modelling of stationary plasma configurations by the variational approach. (Russian. English summary) (81d:76115)
Favorskiĭ, A. P. *See* Dreĭzin, Ju. A.; et al., (81d:76115)
Gentle, James E. *See* Kennedy, William J., Jr., (81g:62005)
Kennedy, William J., Jr. (*with* Gentle, James E.) ★Statistical computing. (81g:62005)
Myŝeckaja, E. E. *See* Dreĭzin, Ju. A.; et al., (81d:76115)
Sosnin, N. V. *See* Dreĭzin, Ju. A.; et al., (81d:76115)

65C05 Monte Carlo methods

(Atwood, Corwin L.) *See* Iman, Ronald L.; et al., 81m:65012
(Beckman, Richard J.) *See* Iman, Ronald L.; et al., 81m:65012
Braaten, Eric An improved measure of the nonuniformity of the distribution of a sequence. 81h:65004
Brown, Mark (*with* Solomon, Herbert; Stephens, Michael A.) Variance reduction in Monte Carlo simulation. 81k:65009b
Conley, W. C. *See* Conley, William, 81m:65010
Conley, William (*with* Conley, W. C.) Computer statistics versus calculus. 81m:65010
Conover, W. J. *See* Iman, Ronald L., 81m:65012
Deák, István Computation of multiple normal probabilities. 81j:65016
Dmitrovskiĭ, V. A. Error estimation in the multiparameter Monte Carlo method. (Russian) 81j:65017
(Easterling, Robert G.) *See* Iman, Ronald L.; et al., 81m:65012
Federico, A. (*with* Tabacco, A.; Tomasso, A.) Effectiveness and error of digital estimates in Monte Carlo simulation of continuous systems. 81m:65011
Halbleib, J. A. (*with* Morel, J. E.) Adjoint Monte Carlo electron transport in the continuous-slowing-down approximation. 81a:65012
Hitzl, Donald L. *See* Maltz, Frederick H., 81d:65007
Iman, Ronald L. (*with* Conover, W. J.) Small sample sensitivity analysis techniques for computer models, with an application to risk assessment. 81m:65012
Johnson, Mark E. *See* Tadikamalla, Pandu R. R., 81k:65008
Kronberg, A. A. Asymptotics of mathematical expectation of the number of steps of an ε-spherical process. (Russian) 81f:65006
Kurbanmuradov, O. A. (*with* Sadullaev, R. S.) Application of the Monte Carlo method to the solution of a problem of steady-state pressure filtration. (Russian) 81b:65009
(Lawrence, William E.) *See* Iman, Ronald L.; et al., 81m:65012
Maltz, Frederick H. (*with* Hitzl, Donald L.) Nonlinear adaptive estimation procedures for increasing the efficiency in Monte Carlo computations. 81d:65007
(McKay, M. D.) *See* Iman, Ronald L.; et al., 81m:65012
Mihaĭlov, G. A. Variance of vector algorithms of the Monte Carlo method. (Russian) 81m:65013
Morel, J. E. *See* Halbleib, J. A., 81a:65012
Pollard, J. M. On not storing the path of a random walk. 81c:65006
Sadullaev, R. S. *See* Kurbanmuradov, O. A., 81b:65009
Ščerbinin, A. F. An optimal sampling method. (Russian) 81j:65018
Sipin, A. S. Solution of two boundary value Dirichlet problems by the Monte Carlo method. (Russian) 81d:65008
Sokolovskiĭ, V. Z. *See* Stojan, Ju. G., 81g:65005
Solomon, Herbert *See* Brown, Mark; et al., 81k:65009b
Stephens, Michael A. *See* Brown, Mark; et al., 81k:65009b
Stojan, Ju. G. (*with* Sokolovskiĭ, V. Z.) ★Решение некоторых многоэкстремальных задач методом сужающихся окрестностей. (Russian) [Solution of some multiextremal problems by the method of restricting neighborhoods] 81g:65005
Tabacco, A. *See* Federico, A.; et al., 81m:65011
Tadikamalla, Pandu R. R. (*with* Johnson, Mark E.) Rejection methods for sampling from the normal distribution. 81k:65008
Tomasso, A. *See* Federico, A.; et al., 81m:65011
Wilson, James R. Proof of the antithetic-variates theorem for unbounded functions. 81c:65007
Žigljavskiĭ, A. A. Some questions connected with sampling from nonuniform distributions. (Russian) 81h:65005
Conference:
Design of Experiments ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. 81k:65009a
Design of experiments ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. 81k:65009a
Natick, Mass. ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. 81k:65009a
Proceedings:
Conference on the Design of Experiments ★Proceedings of the Twenty-Fifth Conference on the Design of Experiments. 81k:65009a

secondary classifications:

Beckman, Richard J. *See* Johnson, Mark E.; et al., (81f:62032)
Buckholtz, Helen *See* Ermak, Donald L., (81d:82003)
Deák, István Monte Carlo methods for computing probabilities of sets in higher-dimensional spaces in case of normal distribution. (Hungarian. English summary) (81c:65008)
Deutsch, Stuart Jay (*with* Schmeiser, Bruce Wayne) Estimation of the sum of differences distribution. (81k:65152)
Ermak, Donald L. (*with* Buckholtz, Helen) Numerical integration of the Langevin equation: Monte Carlo simulation. (81d:82003)
Gorodeckiĭ, V. I. (*with* Jusupov, R. M.) Certain modifications of the Monte Carlo method in problems of optimizing control. (81g:93126)
Johnson, Mark E. (*with* Tietjen, Gary L.; Beckman, Richard J.) A new family of probability distributions with applications to Monte Carlo studies. (81f:62032)
Jusupov, R. M. *See* Gorodeckiĭ, V. I., (81g:93126)
Kurbanmuradov, O. A. *See* Sadullaev, R. S., (81k:76076)
Ozaki, Jiro *See* Tomishima, Yasuo, (81a:81026)
Săcuiu, Ion (*with* Zorilescu, Dan) ★Numere aleatoare. (Romanian) [Random numbers] (81k:65012)
Sadullaev, R. S. (*with* Kurbanmuradov, O. A.) Application of the "walk on a sphere" method for solving stationary problems of filtration theory. (Russian) (81k:76076)
Schmeiser, Bruce Wayne *See* Deutsch, Stuart Jay, (81k:65152)

Shi, Shu Zhong Une généralisation des "bons treillis". (English summary) **(81f:10062)**
Tietjen, Gary L. *See* **Johnson, Mark E.; et al., (81f:62032)**
Tomishima, Yasuo (*with* Ozaki, Jiro) Monte Carlo solution of Schrödinger's equation for the hydrogen atom in a magnetic field. **(81a:81026)**
Zorilescu, Dan *See* **Săcuiu, Ion, (81k:65012)**

65C10 Random number generation

Babu, A. J. G. *See* **Schmeiser, Bruce Wayne, 81g:65006**
Banjević, D. (*with* Ivković, Z.) On algorithmical testing tables of random numbers. **81a:65013**
Bentley, Jon Louis (*with* Saxe, James B.) Generating sorted lists of random numbers. **81k:65010**
Deák, István Monte Carlo methods for computing probabilities of sets in higher-dimensional spaces in case of normal distribution. (Hungarian. English summary) **81c:65008**
Fishman, George S. Sampling from the binomial distribution on a computer. **81c:65009**
Gács, Péter Exact expressions for some randomness tests. **81j:65019**
Hill, G. W. Cyclic properties of pseudorandom sequences of Mersenne prime residues. **81a:65014**
Ichimura, M. *See* **Miyatake, O.; et al., 81a:65016**
Inoue, H. *See* **Miyatake, O.; et al., 81a:65016**
Ivković, Z. *See* **Banjević, D., 81a:65013**
Kimura, H. *See* **Miyatake, O.; et al., 81a:65016**
Kronmal, Richard A. (*with* Peterson, Arthur V., Jr.) On the alias method for generating random variables from a discrete distribution. **81c:65010**
Kumahora, H. *See* **Miyatake, O.; et al., 81a:65016**
Lal, Ram *See* **Schmeiser, Bruce Wayne, 81j:65020**
Marsaglia, George Generating random variables with a t-distribution. **81a:65015**
Maurin, Jacques Towards a theory of chance. I. **81k:65011a**
Towards a theory of chance. II. **81k:65011b**
Miyatake, O. (*with* Yoshizawa, Y.; Inoue, H.; Kumahora, H.; Ichimura, M.; Kimura, H.) On the generation and properties of physical random numbers. **81a:65016**
Nekrutkin, V. V. (*with* Pohodzeĭ, B. B.) The use of pseudorandom numbers in the Box-Müller transformation. (Russian. English summary) **81b:65010**
Niki, Naoto Machine generation of random numbers. (Japanese. English summary) **81c:65004**
Peterson, Arthur V., Jr. *See* **Kronmal, Richard A., 81c:65010**
Pohodzeĭ, B. B. *See* **Nekrutkin, V. V., 81b:65010**
Săcuiu, Ion (*with* Zorilescu, Dan) ★Numere aleatoare. (Romanian) [Random numbers] **81k:65012**
Sakasegawa, H. Uniform random number generators and their standard tests. (Japanese. English summary) **81e:65005**
Saxe, James B. *See* **Bentley, Jon Louis, 81k:65010**
Schmeiser, Bruce Wayne (*with* Lal, Ram) Squeeze methods for generating gamma variates. **81j:65020**
(*with* Shalaby, Mohamed A.) Acceptance/rejection methods for beta variate generation. **81k:65013**
(*with* Babu, A. J. G.) Beta variate generation via exponential majorizing functions. **81g:65006**
Shalaby, Mohamed A. *See* **Schmeiser, Bruce Wayne, 81k:65013**
Tadikamalla, Pandu R. R. Random sampling from the exponential power distribution. **81j:65021**
Yoshizawa, Y. *See* **Miyatake, O.; et al., 81a:65016**
Zorilescu, Dan *See* **Săcuiu, Ion, 81k:65012**

secondary classifications:

Adomian, G. (*with* Elrod, M.) Generation of a stochastic process with desired first and second order statistics. **(81k:65151)**
Elrod, M. *See* **Adomian, G., (81k:65151)**
Gorickiĭ, Ju. A. ★Основы математической статистики. (Russian) [Fundamentals of mathematical statistics] **(81h:62002)**
Kronmal, Richard A. *See* **Peterson, Arthur V., Jr., (81m:62025)**
Niederreiter, Harald Nombres pseudo-aléatoires et équirépartition. **(81k:10084)**
Niki, Naoto Multifolding the normal distribution and mutual transformation between uniform and normal random variables. **(81f:62037a)**
Corrections to: "Multifolding the normal distribution and mutual transformation between uniform and normal random variables". **(81f:62037b)**
O'Brien, G. L. Pairwise independent random variables. **(81d:60011)**
Peterson, Arthur V., Jr. (*with* Kronmal, Richard A.) A representation for discrete distributions by equiprobable mixtures. **(81m:62025)**
Sedgewick, Robert (*with* Szymanski, Thomas G.) The complexity of finding periods. **(81d:68133)**
Šparlinskiĭ, I. E. Completely uniform distribution. (Russian) **(81b:10033)**
Szymanski, Thomas G. *See* **Sedgewick, Robert, (81d:68133)**

65C20 Models, numerical methods

Barnes, C. W. *See* **Buneman, O.; et al., 81j:65022**
Buneman, O. (*with* Barnes, C. W.; Green, James; Nielsen, Dale) Principles and capabilities of 3-D, E-M particle simulations. **81j:65022**
Carson, John S. (*with* Law, Averill M.) Conservation equations and variance reduction in queueing simulations. **81j:65023**
Green, James *See* **Buneman, O.; et al., 81j:65022**
Greene, Edward P. Application of the negative binomial distribution for the modeling of stationary random processes with memory. **81g:65004**
Greenspan, Donald Arithmetic modeling in applied mathematics. **81m:65014**
Heidelberger, Philip Variance reduction techniques for the simulation of Markov processes. I. Multiple estimates. **81k:65014**
Hryniewicz, Z. An approximation of random field with a bounded discrete parameter space. **81m:65015**
Koc, I. P. Use of a factorial number system in optimization in a space of permutations. (Russian) **81h:65006**
Kornerup, Peter *See* **Matula, David W., 81h:65007**
Law, Averill M. *See* **Carson, John S., 81j:65023**
Matula, David W. (*with* Kornerup, Peter) Approximate rational arithmetic systems: analysis of recovery of simple fractions during expression evaluation. **81h:65007**
Mihailov, G. A. Numerical construction of a random field with a given spectral density. (Russian) **81f:65007**
Nekrutkin, V. V. Unbiased estimates for solutions of nonlinear integral equations. (Russian) **81g:65007**
Nielsen, Dale *See* **Buneman, O.; et al., 81j:65022**

secondary classifications:

Anderson, James B. Quantum chemistry by random walk: higher accuracy. **(81i:81026)**
Azadivar, F. (*with* Talavage, J.) Optimization of stochastic simulation models. **(81h:93117)**
Belocerkovskiĭ, O. M. (*with* Erofeev, A. I.; Janickiĭ, V. E.) A nonstationary method for direct statistical simulation of rarefied gas flows. (Russian) **(81k:76052)**
Chorin, Alexandre Joel Random choice methods with applications to reacting gas flow. **(81d:76075)**
Dukowicz, John K. A particle-fluid numerical model for liquid sprays. **(81e:76075)**
Erofeev, A. I. *See* **Belocerkovskiĭ, O. M.; et al., (81k:76052)**
Favorskiĭ, A. P. *See* **Gasilov, V. A.; et al., (81b:76033)**
Gasilov, V. A. (*with* Goloviznin, V. M.; Taran, M. D.; Tiškin, V. F.; Favorskiĭ, A. P.; Šalkov, M. Ju.) Numerical simulations of the Rayleigh-Taylor instability in an incompressible fluid. (Russian. English summary) **(81b:76033)**
Gear, C. William Numerical software: science or alchemy? (*See* **81i:68003)**
Goloviznin, V. M. *See* **Gasilov, V. A.; et al., (81b:76033)**
Janickiĭ, V. E. *See* **Belocerkovskiĭ, O. M.; et al., (81k:76052)**
Samarskiĭ, A. A. Numerical simulation in plasma physics. **(81k:76091)**
Šalkov, M. Ju. *See* **Gasilov, V. A.; et al., (81b:76033)**
Talavage, J. *See* **Azadivar, F., (81h:93117)**
Taran, M. D. *See* **Gasilov, V. A.; et al., (81b:76033)**
Tiškin, V. F. *See* **Gasilov, V. A.; et al., (81b:76033)**

65C99 None of the above, but in this section

Gončarenko, A. A. *See* **Ponomarëv, V. I., (*See* 80d:00013)**
Ponomarëv, V. I. (*with* Gončarenko, A. A.) Stochastic stability of solutions of a class of nonlinear inverse problems. (Russian) (*See* **80d:00013)**
Semeiko, N. G. Computer simulation of a component analysis of the superposition of flows of random events. (Russian. English summary) **81j:65024**

secondary classifications:

Gaenoche, Alain Énumération de classes de permutations. (English summary) **(81b:68036)**

65Dxx Numerical approximation {Primarily algorithms; for theory, see 41–XX.}

secondary classifications:

Herceg, Dragoslav Nonequidistant difference formulas of Hermite type. (Serbo-Croatian. English summary) **(81a:65078)**

65D05 Interpolation

Carlson, R. E. *See* **Fritsch, F. N., 81g:65012**
Chenin, Patrick Integral representation of interpolation error. **81g:65008**
Daško, A. N. An interpolation formula of Thiele type. (Russian) **81i:65007**
Delvos, F.-J. (*with* Posdorf, H.) Reduced trivariate Hermite interpolation. **81g:65009**
Dokken, T. (*with* Lyche, T.) A divided difference formula for the error in Hermite interpolation. **81g:65010**
Esser, Henning Main convergence of the Lagrangian interpolation of improperly Riemann-Stieltjes integrable functions. **81g:65011**
Fritsch, F. N. (*with* Carlson, R. E.) Monotone piecewise cubic interpolation. **81g:65012**
Ganev, H. G. (*with* Georgiev, Kr.) Exact smooth interpolation. Interpolation by expansion into a Maclaurin series. (Bulgarian. Russian and English summaries) **81g:65013**
Georgiev, Kr. *See* **Ganev, H. G., 81g:65013**
Graves-Morris, P. R. Practical, reliable, rational interpolation. **81j:65025**
Hauffmann, Werner On a multivariate Rolle type theorem and the interpolation remainder formula. **81m:65016**
Környei, I. *See* **Žileĭkin, Ja. M., 81b:65126**
Lyche, T. *See* **Dokken, T., 81g:65010**
Matei, Şt. The interpolation of functions of several variables with the help of a numerical calculator. (Romanian. German summary) **81k:65015**
Medvedev, V. A. Interpolational expansions of the solutions of second-order elliptic differential equations. (Russian) **81h:65008**
Monro, Donald M. Interpolation by fast Fourier and Chebyshev transforms. **81a:65017**
Nielson, Gregory M. Applications of a Mangeron theorem for triangular domains. (Romanian summary) **81g:65015**
(*with* Thomas, D. H.; Wixom, J. A.) Interpolation in triangles. **81j:65026**
Minimum norm interpolation in triangles. **81g:65014**
Nishiguchi, Isoharu *See* **Okabe, Masayuki; et al., 81e:65006**
Okabe, Masayuki (*with* Yamada, Yoshiaki; Nishiguchi, Isoharu) Basis transformation of trial function space in Lagrange interpolation. **81e:65006**
Pedersen, Poul Wulff Some approximations for trigonometrical functions. (German

summary) **81g:65016**

Posdorf, H. *See* **Delvos, F.-J., 81g:65009**

Schagen, I. P. The use of stochastic processes in interpolation and approximation. **81x:65018**

Scherer, R. (*with* Zeller, Karl) Two-dimensional grids for polynomials. **81m:65017**

Spiegel, Stanley L. On the evaluation of finite difference derivatives using interpolated data. **81i:65008**

Thomas, D. H. *See* **Nielson, Gregory M.; et al., 81j:65026**

Varudnjak, L. V. Interpolation of functions by continued fractions. (Russian) (*See* **81c:32001**)

Werner, Helmut A reliable method for rational interpolation. **81k:65009**
Ein Algorithmus zur rationalen Interpolation. (English summary) **81f:65008**

Wixom, J. A. *See* **Nielson, Gregory M.; et al., 81j:65026**

Yamada, Yoshiaki *See* **Okabe, Masayuki; et al., 81e:65006**

Zeĭ', È. O. Trigonometric interpolation of type $(0, 1, p, q)$. (Russian) (*See* **81c:32001**)

Zeller, Karl *See* **Scherer, R., 81m:65017**

Žileĭkin, Ja. M. (*with* Környei, I.) Accuracy of interpolation on the classes $D_\beta^{\alpha,\beta,\gamma}(A, B)$. (Russian. English summary) **81b:65126**

secondary classifications:

Baszenski, G. (*with* Delvos, F.-J.; Posdorf, H.) Boolean methods in bivariate reduced Hermite interpolation. **(81g:41002)**

de Boor, Carl Polynomial interpolation. **(81c:41004)**

Delvos, F.-J. *See* **Baszenski, G.; et al., (81g:41002)**

George, J. Alan *See* **Gonnet, Gaston H.; et al., (81f:68054)**

Gonnet, Gaston H. (*with* Rogers, Lawrence D.; George, J. Alan) An algorithmic and complexity analysis of interpolation search. **(81f:68054)**

Goodenough, S. J. (*with* Mills, T. M.) The asymptotic behaviour of certain interpolation polynomials. **(81k:41015)**

Günttner, R. Evaluation of Lebesgue constants. **(81i:41003)**

Heindl, Gerhard Interpolation and approximation by piecewise quadratic C^1-functions of two variables. **(81j:41005)**

Hornung, Ulrich Interpolation by smooth functions under restrictions on the derivatives. **(81e:41001)**

Litvin, O. M. Generalized nonlinear interpolation and the solution of boundary value problems. (Russian. English summary) **(81k:65134)**

Meinguet, Jean Multivariate interpolation at arbitrary points made simple. (French summary) **(81e:41014)**

Mills, T. M. *See* **Goodenough, S. J., (81k:41015)**

Pilipčuk, S. S. Convergence of Lagrange interpolational processes with respect to Jacobi nodes. (Russian) **(81m:41004)**
Divergence of Lagrange interpolation processes on sets of second category. (Russian) **(81a:41007)**

Posdorf, H. *See* **Baszenski, G.; et al., (81g:41002)**

Rogers, Lawrence D. *See* **Gonnet, Gaston H.; et al., (81f:68054)**

65D07 Splines

Behforooz, G. H. (*with* Papamichael, N.) End conditions for interpolatory cubic splines with unequally spaced knots. **81i:65009**
(*with* Papamichael, N.; Worsey, A. J.) A class of piecewise-cubic interpolatory polynomials. **81a:65019**

Bojanov, Borislav D. Uniqueness of the monosplines of least deviation. **81f:65009**

Chang, Robin Lok Ping (*with* Pavlidis, Theodosios) Applications of fuzzy sets in curve fitting. **81j:65027**

Degen, Wendelin Zwei Anwendungen der Linearen Algebra in der numerischen Mathematik. **81m:65018**

Esser, Henning Bounds for divided differences of grid function. **81j:65028**

Gol'denberg, L. M. (*with* Klimontov, V. E.; Seredinskiĭ, A. V.) Recursive methods of construction of interpolating spline functions. **81b:65011**

Grosse, Eric Tensor spline approximation. **81m:65019**

Hruščev, S. N. *See* **Il'in, V. D.; et al., 81h:65010**

Il'in, V. D. (*with* Kurov, B. N.; Hruščev, S. N.) Software for a class of systems for automation of scientific research. (Russian. English summary) **81h:65010**

Imamov, A. Spline functions of two variables. (Russian) **81j:65029**

Kajita, T. *See* **Mizusawa, T.; et al., 81k:65016**

Klimenko, V. T. Reconstruction of a surface from incomplete data by two-dimensional Hermite type splines. (Russian) **81j:65030**

Klimontov, V. E. *See* **Gol'denberg, L. M.; et al., 81b:65011**

Kurov, B. N. *See* **Il'in, V. D.; et al., 81h:65010**

Marti, Jürg T. An algorithm recursively computing the exact Fourier coefficients of B-splines with nonequidistant knots. (German summary) **81f:65010**

Mettke, Holger Quadratische Splineinterpolation bei zusammenfallendem Interpolations- und Splinegitter. **81i:65010**

Micchelli, Charles A. On a numerically efficient method for computing multivariate B-splines. **81g:65017**

Mizusawa, T. (*with* Kajita, T.; Naruoka, M.) Vibration and buckling analysis of plates of abruptly varying stiffness. **81k:65016**

Naruoka, M. *See* **Mizusawa, T.; et al., 81k:65016**

Papamichael, N. *See* **Behforooz, G. H.; et al., 81a:65019** *and* **Behforooz, G. H., 81i:65009**

Pavlidis, Theodosios *See* **Chang, Robin Lok Ping, 81j:65027**

Rack, Heinz-Joachim Ein Existenzsatz für kubische Splinefunktionen. **81a:65020**

Reutrop, P. An algorithm for the computation of the exponential spline. **81h:65011**

Seredinskiĭ, A. V. *See* **Gol'denberg, L. M.; et al., 81b:65011**

Utreras D., F. Cross-validation techniques for smoothing spline functions in one or two dimensions. **81k:65017**

Wang, Neng Chao The piecewise spline interpolation method. (Chinese. English summary) **81m:65020**

Worsey, A. J. *See* **Behforooz, G. H.; et al., 81a:65019**

secondary classifications:

Adamczyk, L. Monotone spline interpolations and optimal control problem. **(81m:49037)**

Agačev, Ju. R. Approximate solution of the Goursat problem by the spline-collocation method. (Russian) **(81b:65108)**
Spline-methods for solving differential and integro-differential equations. (Russian) **(81b:65120)**

Aronsson, Gunnar Perfect splines and nonlinear optimal control theory. **(81h:93026)**

Ascher, Uri Solving boundary-value problems with a spline-collocation code. **(81a:65072)**

Blaga, Petru P. (*with* Coman, Gheorghe) On some bivariate spline operators. **(81g:41014)**

Chui, Charles K. (*with* Smith, Philip W.; Ward, J. D.) Monotone approximation by spline functions. **(81k:41006)**

Coman, Gheorghe *See* **Blaga, Petru P., (81g:41014)**

Craven, Peter (*with* Wahba, Grace) Smoothing noisy data with spline functions. Estimating the correct degree of smoothing by the method of generalized cross-validation. **(81g:65018)**

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Demko, S. Approximation by small rank tensor products of splines. **(81m:41007)**

DeVore, Ronald A. *See* **Dahmen, Wolfgang; et al., (81j:41015)**

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Irie, Toshihiro (*with* Yamada, Gen; Takahashi, Ichiro) In-plane vibration of a free-clamped slender arc of varying cross section. **(81g:73093)**

Jakimovski, A. (*with* Russell, D. C.) On an interpolation problem for functions of several variables and spline functions. **(81i:41006)**

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Kiountouzis, E. A. *See* **Young, Andrew, (81b:41072)**

Kirov, G. H. Some extremal problems for κ-splines. (Russian) **(81k:41009)**

Klimenko, N. S. Smoothing by convex cubic splines. (Russian) **(81k:41008)**

Korsjuk, O. I. *See* **Danilovič, V. P., (81h:65131)**

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Merz, Gerhard *See* **Meinardus, Günter, (81g:41005)**

Muller, George M. Spline filters. **(81a:94006)**

Neuman, Edward Uniform approximation by some Hermite interpolating splines. **(81e:41017)**
Convex interpolating splines of arbitrary degree. (German summary) **(81e:41018)**

Oliveira, F. Aleixo Numerical solution of two-point boundary value problems and spline functions. **(81m:65137)**

Pereverzev, S. V. (*with* Šabozov, M.) On the question of quadrature and cubature formulas that are connected with Hermite splines. (Russian) **(81h:41078)**
Exact values of approximation by Hermitian splines on a class of functions of two variables. (Russian) **(81c:41023)**

Pisarenko, V. G. Interpolation with smoothing by convex cubic splines with optimization of terminal conditions. (Russian) **(81h:41018)**

Rice, John R. Multivariate piecewise polynomial approximation. **(81j:41022)**

Russell, D. C. *See* **Jakimovski, A., (81i:41006)**

Šabozov, M. *See* **Pereverzev, S. V., (81h:41078)**

Sallam, S. M. On the stability of quasidouble step spline function approximations for solutions of initial value problems. **(81m:65123)**

Scherer, Karl *See* **Dahmen, Wolfgang; et al., (81j:41015)**

Schlöglmann, Wolfgang Elliptische Differentialoperatoren und Splines. **(81d:41009)**
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Seatzu, S. (*with* Testa, F.) Interpolation and one- and two-dimensional smoothing relative to linear differential operators. (Italian. English summary) **(81f:41013)**

Sidhu, Gursharan S. (*with* Weinert, Howard L.) Vector-valued Lg-splines. I. Interpolating splines. **(81c:41028)**

Smith, Patricia L. (*with* Smith, Philip W.) Empirical stopping rules for data fitting by splines. **(81a:65021)**

Smith, Philip W. *See* **Smith, Patricia L., (81a:65021)** *and* **Chui, Charles K.; et al., (81k:41006)**

Spiegelman, Clifford H. (*with* Studden, W. J.) Design aspects of Scheffé's calibration theory using linear splines. **(81j:62148)**

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B-splines. II. (Chinese) **(81i:41010b)**
B-splines. III. (Chinese) **(81i:41010c)**
B-splines. IV. (Chinese) **(81i:41010d)**

Strauss, Hans Optimal quadrature formulas. **(81b:41024)**
Über Fehlerabschätzungen bei besten Quadraturformeln. **(81g:65032)**

Studden, W. J. *See* **Spiegelman, Clifford H., (81j:62148)**

Subbotin, Ju. N. Extremal and approximate properties of splines. (Russian) **(81b:41025)**

Takahashi, Ichiro *See* **Irie, Toshihiro; et al., (81g:73093)**

Testa, F. *See* **Seatzu, S., (81f:41013)**

Wahba, Grace Convergence rate of "thin plate" smoothing splines when the data are noisy (preliminary report). **(81j:62081)**
See also **Craven, Peter, (81g:65018)**
Ward, J. D. *See* **Chui, Charles K.; et al., (81k:41006)**
Wegman, Edward J. *See* **Wright, Ian W., (81k:41009)**
Weinert, Howard L. *See* **Sidhu, Gursharan S., (81c:41028)**
Wright, Ian W. (*with* Wegman, Edward J.) Isotonic, convex and related splines. **(81k:41009)**
Yamada, Gen *See* **Irie, Toshihiro; et al., (81g:73093)**
Young, Andrew (*with* Kiountouzis, E. A.) Best approximation in an asymmetrically weighted L_1 measure. **(81b:41072)**

65D10 Smoothing, curve fitting

Altan, M. Orhan (*with* Bopp, Hanspeter; Krauss, Herbert) The rigid determination of the least-squares fitting of a straight line with correlated coordinates. (Turkish summary) **81i:65011**
Armstrong, Ronald D. (*with* Kung, David S.) A dual method for discrete Chebychev curve fitting. **81j:65031**
(*with* Sklar, Michael G.) A linear programming algorithm for curve fitting in the L_∞ norm. **81j:65032**
Björck, Åke (*with* Duff, Iain S.) A direct method for the solution of sparse linear least squares problems. **81m:65021**
Bopp, Hanspeter *See* **Altan, M. Orhan; et al., 81i:65011**
Cheng, Stephen W. *See* **Eisenfeld, Jerome, 81j:65033**
Craven, Peter (*with* Wahba, Grace) Smoothing noisy data with spline functions. Estimating the correct degree of smoothing by the method of generalized cross-validation. **81g:65018**
Domich, P. (*with* Lawrence, Jim; Shier, D. R.) Generators for discrete polynomial L_1 approximation problems. **81b:65012**
Duff, Iain S. *See* **Björck, Åke, 81m:65021**
Eisenfeld, Jerome (*with* Cheng, Stephen W.) General moment methods for a class of nonlinear models. **81j:65033**
Farinha Cadete, Antonio M. *See* **Rodrigues Cadete, M. Odete C., 81m:65023**
Feinstein, David *See* **Ichimura, Hideo; et al., 81j:65034**
Ichimura, Hideo (*with* Feinstein, David; Schwartz, Richard F.) Studies on the determination of multiple numbers of experimental parameters. I. Preliminary study. **81j:65034**
Kammler, David W. (*with* McGlinn, Robert J.) Local conditioning of parametric forms used to approximate continuous functions. **81g:65019**
Krauss, Herbert *See* **Altan, M. Orhan; et al., 81i:65011**
Kung, David S. *See* **Armstrong, Ronald D., 81j:65031**
Lawrence, Jim *See* **Domich, P.; et al., 81b:65012**
McGlinn, Robert J. *See* **Kammler, David W., 81g:65019**
McLean, Robin A. (*with* Watson, G. Alistair) Numerical methods for nonlinear discrete L_1 approximation problems. **81h:65012**
Morris, James G. *See* **Norback, John P., 81e:65007**
Newbery, A. C. R. Sensitivity analysis for polynomial curve-fitting. **81b:65013**
Norback, John P. (*with* Morris, James G.) Fitting hyperplanes by minimizing orthogonal deviations. **81e:65007**
Pazdur, Anna *See* **Pazdur, Mieczysław, 81g:65020**
Pazdur, Mieczysław (*with* Pazdur, Anna) Application of the nonlinear least squares method to the estimation of the parameters of a function for approximation of the results of measurements. (Polish. Russian and English summaries) **81g:65020**
Pouzet, J. Estimation of a surface with known discontinuities for automatic contouring purposes. **81m:65022**
Rigler, A. K. *See* **St. Clair, D. C., 81j:65035**
Rodrigues Cadete, M. Odete C. (*with* Farinha Cadete, Antonio M.) A program for curve-fitting for an ICL 4130 computer. (Portuguese) **81m:65023**
Schwartz, Richard F. *See* **Ichimura, Hideo; et al., 81j:65034**
Shier, D. R. *See* **Domich, P.; et al., 81b:65012**
Sklar, Michael G. *See* **Armstrong, Ronald D., 81j:65032**
Smith, Patricia L. (*with* Smith, Philip W.) Empirical stopping rules for data fitting by splines. **81a:65021**
Smith, Philip W. One-pass curve fitting. **81a:65022**
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Soanes, Royce W., Jr. Efficient algorithms for continuous piecewise linear approximants with variable knots. **81a:65023**
St. Clair, D. C. (*with* Rigler, A. K.) An algorithm for least squares analysis of spectroscopic data. **81j:65035**
Swarztrauber, Paul N. On the spectral approximation of discrete scalar and vector functions on the sphere. **81c:65011**
Wahba, Grace *See* **Craven, Peter, 81g:65018**
Watson, G. Alistair *See* **McLean, Robin A., 81h:65012**
Zaharova, N. V. *See* **Zalevskiĭ, V. I., 81j:65036**
Zalevskiĭ, V. I. (*with* Zaharova, N. V.) Construction of a plane curve from a small number of points. (Russian) **81j:65036**

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Armstrong, Ronald D. (*with* Kung, Mabel Tam) An algorithm for a least absolute value regression problem with bounds on the parameters. **(81j:90135)**
Cavaretta, Alfred S., Jr. (*with* Sharma, Ambikeshwar; Varga, Richard S.) Lacunary trigonometric interpolation on equidistant nodes. **(81k:42004)**
Crone, L. *See* **Sullivan, J.; et al., (81m:41021)**
Gresho, Philip M. *See* **Lee, Robert L.; et al., (81e:76025)**
Jalickee, J. *See* **Sullivan, J.; et al., (81m:41021)**
Johnson, Harold H. (*with* Vogt, Andrew) A geometric method for approximating convex arcs. **(81f:52020)**
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Kung, Mabel Tam *See* **Armstrong, Ronald D., (81j:90135)**
Lee, Robert L. (*with* Gresho, Philip M.; Sani, Robert L.) Smoothing techniques for certain primitive variable solutions of the Navier-Stokes equations. **(81e:76025)**
Lyche, T. *See* **Koch, P. E., (81k:42005)**
Nielson, Gregory M. (*with* Thomas, D. H.; Wixom, J. A.) Interpolation in triangles. **(81j:65026)**
Sani, Robert L. *See* **Lee, Robert L.; et al., (81e:76025)**
Seatzu, S. (*with* Testa, F.) Interpolation and one- and two-dimensional smoothing relative to linear differential operators. (Italian. English summary) **(81f:41013)**
Serio, Gabriella A numerical method of parameter estimation for a class of nonlinear regression models. (Italian. English summary) **(81c:62076)**
Sharma, Ambikeshwar *See* **Cavaretta, Alfred S., Jr.; et al., (81k:42004)**
Spedicato, E. Parameter estimation and least squares. **(81i:62053)**
Sullivan, J. (*with* Crone, L.; Jalickee, J.) Approximation of the unit step function by a linear combination of exponential functions. **(81m:41021)**
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Thomas, D. H. *See* **Nielson, Gregory M.; et al., (81j:65026)**
Utreras D., F. Cross-validation techniques for smoothing spline functions in one or two dimensions. **(81k:65017)**
Vapnik, V. N. ★Восстановление зависимостей по эмпирическим данным. (Russian) [Reconstruction of functions from empirical data] **(81m:62050)**
Varga, Richard S. *See* **Cavaretta, Alfred S., Jr.; et al., (81k:42004)**
Vogt, Andrew *See* **Johnson, Harold H., (81f:52020)**
Wixom, J. A. *See* **Nielson, Gregory M.; et al., (81j:65026)**

65D15 Algorithms for functional approximation

Bacopoulos, A. (*with* Zahar, R. V. M.) An error analysis for absolute and relative approximation. **81b:65014**
Bandyrskiĭ, B. Ĭ. *See* **Slon'ovs'kiĭ, R. V., 81i:65018**
Bilenko, V. I. Numerical process of approximation of implicit functions of two variables by polynomials. (Russian. English summary) **81a:65024**
Brent, Richard P. Unrestricted algorithms for elementary and special functions. (*See* **81i:68009**)
Brezinski, Claude Sur le calcul de certains rapports de déterminants. **81m:65024**
Bultheel, Adhemar Recursive algorithms for the Padé table: two approaches. **81h:65013**
Carmignani, Marta (*with* Morandi, Rossana) On an algorithm of Phillips and Cox for best uniform approximation by means of stepwise linear polynomials. (Italian) **81m:65025**
Černous'ko, F. L. Approximation of integral functionals and numerical solution of variational problems. **81a:65025**
Cheney, E. W. Approximating multivariate functions by combinations of univariate ones. **81a:65026**
Best approximation in tensor product spaces. **81i:65012**
Claessens, G. (*with* Wuytack, L.) On the computation of nonnormal Padé approximants. **81i:65013**
Cosnard, Michel On the behavior of successive approximations. **81a:65027**
Crawford, Charles R. *See* **Dunham, Charles B., 81f:65011**
Demkiv, I. I. (*with* Susol, I. T.) Generalized nonlinear Taylor-Cauchy-Aitken formula. (Russian) **81i:65014**
Dunham, Charles B. A Fortran program for discrete nonlinear Chebyshev approximation. **81j:65037**
(*with* Crawford, Charles R.) Minimax approximation by a semicircle. **81f:65011**
Dupont, Todd (*with* Scott, L. Ridgway) Polynomial approximation of functions in Sobolev spaces. **81h:65014**
Evans, John W. (*with* Gragg, William B.; LeVeque, Randall J.) On least squares exponential sum approximation with positive coefficients. **81b:65015**
Ferguson, Le Baron O. Numerical aspects of approximation by polynomials with integral coefficients. (*See* **80a:65015**)
Frolova, P. V. (*with* Pustomel'nikova, N. I.) The nonlinear formula of Darboux-Aitken. (Russian) **81i:65015**
Gilewicz, Jacek (*with* Magnus, Alphonse) Valleys in c-table. **81i:65016**
Glashoff, Klaus (*with* Schultz, Reinhart) Über die genaue Berechnung von besten L^1-Approximierenden. **81f:65012**
Gragg, William B. *See* **Evans, John W.; et al., 81b:65015**
Graves-Morris, P. R. The numerical calculation of Padé approximants. **81j:65038**
Hettich, R. Numerical methods for nonlinear Chebyshev approximation. **81g:65021**
Hill, Edward, Jr. Discrete rational approximation in the L_1 and L_∞ norms using the simplex method. **81g:65022**
Ivanov, V. V. Algorithms optimal with respect to accuracy for the approximation of functions of some classes by computers. (Russian) **81b:65016**
Jittorntrum, Krisorn (*with* Osborne, M. R.) Strong uniqueness and second-order convergence in nonlinear discrete approximation. **81k:65018**
Jones, William B. (*with* Magnus, Arne) Computation of poles of two-point Padé approximants and their limits. I. **81j:65039**
Karon, John M. Computing improved Chebyshev approximations by the continuation method. I. Description of an algorithm. **81e:65008**
LeVeque, Randall J. *See* **Evans, John W.; et al., 81b:65015**
Luke, Yudell L. Computations of coefficients in the polynomials of Padé approximations by solving systems of linear equations. **81m:65026**
Magnus, Alphonse *See* **Gilewicz, Jacek, 81i:65016**
Magnus, Arne *See* **Jones, William B., 81j:65039**
Mahoney, J. F. Partial fraction evaluation by an escalation technique. **81k:65019**
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Marko, V. F. (*with* Maksymiv, E. M.; Pustomel'nikov, Ĭ. P.) Nonlinear Taylor-Aitken formulas. (Russian) **81i:65017**
Morandi, Rossana *See* **Carmignani, Marta, 81m:65025**
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Osborne, M. R. *See* **Jittorntrum, Krisorn, 81k:65018**
Pustoml'nikov, I. P. *See* **Marko, V. F.; et al., 81i:65017**
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Schabeck, Robert Suboptimal exponential approximations. **81b:65017**
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Scott, L. Ridgway *See* **Dupont, Todd, 81h:65014**
Sion'ovs'kiĭ, R. V. (*with* Bandyrskiĭ, B. I.) The nonlinear formula of Mikeladze-Aitken. (Russian) **81i:65018**
Stokes, A. N. A stable quotient-difference algorithm. **81i:65019**
Susol, I. T. *See* **Demkiv, I. I., 81i:65014**
Vasilenko, V. A. Approximate solution of the problem of continuation of functions by the finite element method. (Russian) **81j:65040**
Wuytack, L. *See* **Claessens, G., 81i:65013**
Zahar, R. V. M. *See* **Bacopoulos, A., 81b:65014**

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Arĭanyh, I. S. A class of solutions of a Lamé system by means of homogeneous harmonic functions. (Russian) **(81d:35008)**
Barnett, Stephen *See* **Maroulas, John, (81i:41014)**
Brass, Helmut Approximation durch Teilsummen von Orthogonalpolynomreihen. (English summary) **(81e:42036)**
Bultheel, Adhemar Recursive algorithms for the matrix Padé problem. **(81h:41017)**
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DeVore, Ronald A. (*with* Scherer, Karl) Variable knot, variable degree spline approximation to x^β. **(81m:41008)**
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Grenez, Francis Inscription optimale d'un polynôme entre deux courbes données. **(81j:41010)**
Hlawka, Edmund Weierstraßcher Approximationssatz und Gleichverteilung. (English summary) **(81a:41013)**
Katrahova, A. A. Approximation of the solutions to some singular elliptic boundary value problems. (Russian) **(81k:65122)**
Maroulas, John (*with* Barnett, Stephen) Continued-fraction expansions for ratios of generalized polynomials. **(81i:41014)**
Mihlin, S. G. Constants in estimates of the error of variational-grid approximation. (Russian) **(81g:41028)**
Nørsett, Syvert P. (*with* Wanner, G.) The real-pole sandwich for rational approximations and oscillation equations. **(81d:65040)**
Pindor, Maciej Padé approximants and rational functions as tools for finding poles and zeros of analytical functions measured experimentally. **(81c:65016)**
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Reznik, A. A. (*with* Rjaben'kiĭ, V. S.) An accelerated method of internal boundary conditions and a related approach to the calculation of singular integrals. (Russian) **(81b:65086)**
Rice, John R. Remarks on piecewise polynomial approximation. **(81m:41010)** Multivariate piecewise polynomial approximation. **(81j:41022)**
Rjaben'kiĭ, V. S. *See* **Reznik, A. A., (81b:65086)**
Rodrigues, A. J. Convergence of Padé kernel approximants to the delayed Dirac function. **(81c:41031)**
Rusak, V. N. ★Рациональные функции как аппарат приближения. (Russian) [Rational functions as approximation apparatus] **(81c:41030)**
Schempp, Walter Interpolation zonaler harmonischer Funktionen. **(81j:31005)**
Scherer, Karl *See* **DeVore, Ronald A., (81m:41008)**
Sidi, Avram Some aspects of two-point Padé approximants. **(81i:41015)**
Siemaszko, Wojciech Branched continued fractions for double power series. **(81k:30006)**
Stark, Henry Sampling theorems in polar coordinates. **(81a:68104)**
Stens, R. L. Gewichtete beste Approximation stetiger Funktionen durch algebraische Polynome. (English summary) **(81d:41036)**
Ubhaya, Vasant A. An $O(n)$ algorithm for discrete n-point convex approximation with applications to continuous case. **(81b:41071)**
Wanner, G. *See* **Nørsett, Syvert P., (81d:65040)**

65D20 Computation of special functions, construction of tables

Allasia, G. (*with* Bonardo, F.) On the numerical evaluation of two infinite products. **81f:65013**
Babenko, K. I. (*with* Jur'ev, S. P.) Discretization of a problem of Gauss. (Russian) **81h:65015**
Bonardo, F. *See* **Allasia, G., 81f:65013**
Bruce, Ian A means generated iteration for cube roots. **81g:65023**
Cholewicki, Tadeusz Determination of values of special functions by the method of difference equations and continuants. (Polish. Russian and English summaries) **81m:65027**
Clenshaw, C. W. (*with* Olver, F. W. J.) An unrestricted algorithm for the exponential function. **81k:65020**
Eder, E. Approximationen für die vollständigen elliptischen Normalintegrale erster, zweiter und dritter Gattung. **81i:65020**
Engels, Hermann Asymptotische Entwicklungen aller Nullstellen des Legendre Polynoms $L_n(x)$ nach Potenzen von $1/[n(n+1)]$. **81f:65014**
Ferrero, Oscar (*with* Rossati, Franco) Polynomial approximations of definite functions by means of differential equations. (Italian. English summary) **81b:65018**
Gautschi, Walter A computational procedure for incomplete gamma functions. (Italian) **81f:65015**
Jur'ev, S. P. *See* **Babenko, K. I., 81h:65015**
Luke, Yudell L. On a summability method. **81g:65024**
Maksymiv, E. M. Approximate properties of Thiele's formula in a class of elementary functions. (Russian) **81i:65021**
McCullagh, Peter A rapidly convergent series for computing $\psi(z)$ and its derivatives. **81m:65028**
Olver, F. W. J. *See* **Clenshaw, C. W., 81k:65020**
Rossati, Franco *See* **Ferrero, Oscar, 81b:65018**
Schonfelder, J. L. Very high accuracy Chebyshev expansions for the basic trigonometric functions. **81f:65016**
Thacher, Henry C., Jr. New backward recurrences for Bessel functions. **81b:65019**
Tretter, Marietta J. (*with* Walster, G. W.) Analytic subtraction applied to the incomplete gamma and beta functions. **81m:65029**
Walster, G. W. *See* **Tretter, Marietta J., 81m:65029**

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Chamayou, J. M. F. Numerical evaluation of a solution of a special mixed-type differential-difference equation. **(81m:65189)**
Char, Bruce W. On Stieltjes' continued fraction for the gamma function. **(81b:65008)**
Fransén, Arne (*with* Wrigge, Staffan) High-precision values of the gamma function and of some related coefficients. **(81f:65004)**
Gatteschi, Luigi On the construction of some Gaussian quadrature rules. **(81f:65026)**
Horner, T. S. Recurrence relations for the coefficients in Chebyshev series solutions of ordinary differential equations. **(81d:65038)**
Jagudin, S. V. Reduction of time and increase of accuracy of the determination of the momentum factor of supersonic jets in calculations by numerical methods. (Russian) **(81f:76030)**
Lee, Soo-Y. The inhomogeneous Airy functions, $Gi(z)$ and $Hi(z)$. **(81b:33015)**
Nikolaev, I. N. An approximate method for determining the length of an ellipse. (Russian) **(81i:51016)**
Oliver, J. On the application of Newbery's transformation to the Reinsch polynomial evaluation scheme. **(81g:65055)**
Olver, F. W. J. Asymptotic approximations and error bounds. **(81c:41071)**
Parhomovskiĭ, Ja. M. Approximate formulas for elliptic integrals of the third kind. (Russian) **(81b:33003)**
Wrigge, Staffan *See* **Fransén, Arne, (81f:65004)**
Zanovello, Renato Numerical analysis of the Laplace transform of the Struve function $H_\nu(x)$. (Italian) **(81j:44002)**

65D25 Numerical differentiation

Alessandrini, Giovanni On differentiation of approximately given functions. **81k:65021**
Hicks, H. R. (*with* Wooten, J. W.) Numerical divergence of a tensor. **81k:65022**
Oliver, J. An algorithm for numerical differentiation of a function of one real variable. **81e:65009** The selection of interpolation points in the numerical approximation of second and third order derivatives. **81m:65030** *See also* **Ruffhead, A., 81k:65023**
Ruffhead, A. (*with* Oliver, J.) A characterisation of certain optimal collocation points for numerical differentiation. **81k:65023**
Wang, Xing Hua The remainder terms of a formula for numerical differentiation. (Chinese. English summary) **81b:65020**
Wooten, J. W. *See* **Hicks, H. R., 81k:65022**

secondary classifications:

Cullum, Jane The effective choice of the smoothing norm in regularization. **(81b:65130)**
Johnson, Ivan L., Jr. *See* **Kelley, Henry J.; et al., (81f:65050)**
Kelley, Henry J. (*with* Lefton, Leon; Johnson, Ivan L., Jr.) Perturbation-magnitude control for difference-quotient estimation of derivatives. **(81f:65050)**
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Lefton, Leon *See* **Kelley, Henry J.; et al., (81f:65050)**
Serbin, Steven M. Rational approximations of trigonometric matrices with application to second-order systems of differential equations. **(81g:65101)**
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Zaharov, A. Ju. (*with* Krugljakov, S. V.) A difference operator of high-order accuracy and its application in the method of lines. (Russian) **(81m:65156)**

65D30 Numerical integration

Aristov, V. V. A generalized approach to functionally oriented numerical integration. (Russian. English summary) **81j:65041**
Blue, James L. A Legendre polynomial integral. **81b:65021a** *See also* **Gautschi, Walter, 81b:65021b**
Callò, F. (*with* Dagnino, C.) On the numerical evaluation of Cauchy principal values of integrals. (Italian. English summary) **81j:65042**
Dagnino, C. *See* **Callò, F., 81j:65042**
Derr, Leroy (*with* Outlaw, Curtis; Sarafyan, Diran) Generalization of Euler-Maclaurin sum formula to the six-point Newton-Cotes quadrature formula. (Italian summary) **81f:65017**
Elliott, David On the convergence of Hunter's quadrature rule for Cauchy principal value integrals. **81m:65031**
Frey, A. E. (*with* Hall, Charles Allen; Porsching, T. A.) Numerical integration and the constant strain condition. **81a:65029**
Gabutti, Bruno On the generalization of a method for computing Bessel function integrals. **81e:65010**
Gautschi, Walter On generating Gaussian quadrature rules. **81m:65032** On the preceding paper "A Legendre polynomial integral" by James L. Blue. **81b:65021b**
Gori, Laura Nicolò-Amati General formulation of a problem concerning quadrature formulas. (Italian. English summary) **81f:65021**

Hall, Charles Allen *See* **Frey, A. E.; et al., 81a:65029**
Handscomb, D. C. Optimal cubature over a bounded plane region. **81a:65030**
Heindl, Gerhard Über einen Zusammenhang zwischen optimalen Formeln im Sinne von Sard und besten Formeln im Sinne des minimalen Maximalfehlers. **81k:65024**
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Kreyszig, Erwin Newton-Cotes-Koeffizienten und Binomialverteilung. **81f:65019**
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Leonov, A. I. *See* **Onegov, L. A., 81g:65026**
Locher, Franz Dividierte Differenzen und Monotonie von Quadraturformeln. (English summary) **81h:65016**
Lugannani, Robert (*with* Rice, Stephen) Use of Gaussian convergence factors in the numerical evaluation of slowly converging integrals. **81k:65025**
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Monegato, Giovanni An overview of results and questions related to Kronrod schemes. **81m:65033**
Mori, Masatake An IMT-type double exponential formula for numerical integration. **81c:65012**
Muratlaeva, È. D. (*with* Musaev, B. I.) Convergence of quadrature processes for singular integrals over an interval. (Russian) **81j:65044**
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Napolitano, Michele (*with* Rubini, F.; Vacca, G.) A fourth-order-accurate direct and inverse Cauchy integral solver. **81j:65046**
Onegov, L. A. (*with* Leonov, A. I.) Approximate calculation of multidimensional singular integrals with Hilbert-type kernels. (Russian) **81g:65026**
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Schneider, Claus Produktintegration mit nicht-äquidistanten Stützstellen. (English summary) **81j:65049**
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Sloan, Ian H. On choosing the points in product integration. **81g:65029**
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van der Sluis, A. (*with* Zweerus, J. R.) An appraisal of some methods for computing Cauchy principal values of integrals. **81f:65023**
Smith, H. V. The numerical approximation of a class of infinite integrals. **81g:65031**
Smith, William E. (*with* Sloan, Ian H.) Product-integration rules based on the zeros of Jacobi polynomials. **81h:65018**
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Spence, Alastair Product integration for singular integrals and singular integral equations. **81f:65024**
Sprössig, Wolfgang Quadratur mehrdimensionaler singulärer Parameterintegrale und ihre Anwendung zur Lösung partieller Differentialgleichungen. **81h:65019**
Stokes, Arnold P. Comparison theorems and instability with applications to numerical integration, satellite orbits and averaging. **81h:65020**
Strauss, Hans Über Fehlerabschätzungen bei besten Quadraturformeln. **81g:65032**
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Reliable evaluation of Gaussian integrals. **81g:65033**
Theocaris, P. S. (*with* Ioakimidis, N. I.; Kazantzakis, J. G.) On the numerical evaluation of two-dimensional principal value integrals. **81g:65034**
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Wang, A. P. On surface-area integration and the related mapping. **81c:65013**
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secondary classifications:

Aarseth, S. J. An N-body integration method in co-moving coordinates. **(81a:70011)**
Barker, G. P. *See* **Luke, Yudell L., (81d:15008)**
Barrow, David L. (*with* Smith, Philip W.) Asymptotic properties of optimal quadrature formulas. **(81l:41024)**
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Bojanov, Borislav D. Uniqueness of optimal nodes of quadrature formulas. (Russian) **(81e:41043)**
Brezuleanu, Al. (*with* Cuculescu, I.; Popovici, Iulian; Turtoi, Adriana) Computation of areas on earth-ellipsoid. (*See* **81j:93006b**)
Chrysakis, A. C. *See* **Theocaris, P. S.; et al., (81i:65109)**
Cuculescu, I. *See* **Brezuleanu, Al.; et al., (*See* 81j:93006b)**
Dmitrovskiĭ, V. A. Error estimation in the multiparameter Monte Carlo method. (Russian) **(81j:65017)**
Egorov, A. D. Approximate formulas for continual integrals with respect to stationary Gaussian measures. (Russian. English summary) **(81m:28015)**
Ferrell, Richard A. *See* **Bhattacharjee, Jayanta K., (81g:81022)**
Gabdulhaev, B. G. Finite-dimensional approximations of singular integrals and direct methods for solving singular integral and integro-differential equations. (Russian) **(81m:45019)**
Grundmann, Axel (*with* Möller, Hans Michael) Invariant integration formulas for the n-simplex by combinatorial methods. **(81e:41045)**
Hellekalek, Peter Zur Konvergenz der L_n-Diskrepanz gegen die extreme Diskrepanz. (English summary) **(81g:10070)**
Ioakimidis, N. I. *See* **Theocaris, P. S.; et al., (81i:65109)**
Loxton, John H. (*with* Sanders, J. W.) On an inversion theorem of Möbius. **(81k:10006)**
Luke, Yudell L. (*with* Barker, G. P.) On asymptotic expansions for functions of matrix argument. **(81d:15008)**
Magazenkov, L. N. Schemes for integration with respect to time of the equations of motion of a fluid, with effective suppression of high-frequency components. (Russian) **(81g:76033)**
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Pajunen, Petri Extensions of a method for evaluating higher-order semiclassical phase integrals. **(81k:81038)**
Park, K. C. (*with* Underwood, P. G.) A variable-step central difference method for structural dynamics analysis. I. Theoretical aspects. **(81d:73065)**
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Richard, J.-F. (*with* Tompa, H.) On the evaluation of poly-t density functions. **(81e:62060)**
Sanders, J. W. *See* **Loxton, John H., (81k:10006)**
Ščerbinin, A. F. An optimal sampling method. (Russian) **(81j:65018)**
Shi, Shu Zhong Une généralisation des "bons treillis". (English summary) **(81f:10062)**
Sidi, Avram Some properties of a generalization of the Richardson extrapolation process. **(81a:65011)**
Simons, Stephen The use of polynomials in evaluating certain probabilistic integrals. **(81k:65153)**
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Terehin, A. P. Estimation of a multiple integral by integrals of lower multiplicity. (Russian) **(81h:41035)**
Theocaris, P. S. (*with* Ioakimidis, N. I.; Chrysakis, A. C.) On the application of numerical integration rules to the solution of some singular integral equations. **(81i:65109)**
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65D32 Quadrature and cubature formulas

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Akopjan, G. G. Error estimates for cubature formulas for differentiable functions on domains with degenerate angles. (Russian) **81c:65014**
Anselone, P. M. (*with* Opfer, Gerhard) Numerical integration of weakly singular functions. **81m:65034**
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Bullen, P. S. Error estimates for some elementary quadrature rules. **81h:65022**
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Gabdulhaev, B. G. (*with* Šaripov, R. N.) Optimization of quadrature formulas with multiple nodes for singular integrals. (Russian) **81g:65036**
Gatteschi, Luigi On the construction of some Gaussian quadrature rules. **81f:65026**
Genz, A. C. *See* **Lyness, J. N., 81j:65052**
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See also **Levin, M. I., 81j:65051**
Guk, V. M. (*with* Novikov, L. A.) Regularization of integrals with power singularities of fractional order. (Russian) **81i:65022**
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Kratz, Lawrence J. Replacing a double integral with a single integral. **81a:65034**

Krenk, S. Quadrature formulae of closed type for solution of singular integral equations. **81f:65027**

Kreß, Rainer On error norms of the trapezoidal rule. **81e:65013**

Kustov, Ju. A. Approximate evaluation of singular integrals on an interval of a real line. (Russian. Azerbaijani and English summaries) **81a:65035**

Kuzjutin, V. F. On the question of error of complicated Simpson quadrature formulas and the "three-eighths rule" for given classes of functions. (Russian) **81m:65037**

Error of a cubature formula with equal coefficients and an equidistant grid of nodes on some classes of functions. (Russian) **81m:65038**

Kuz'mina, A. L. A best quadrature formula for integrals with a Cauchy kernel. (Russian) **81g:65037**

Interval quadrature formulas with multiple nodal intervals. (Russian) **81k:65026**

Lange, Gerald Optimale definite Quadraturformeln. **81k:65027**

Lether, Frank G. Error estimates for Gaussian quadrature. **81m:65039**

Levin, M. I. (*with* Girkovitš, J.) ★Optimal quadrature formulas. **81j:65051**

Locher, Franz Fehlerkontrolle bei der numerischen Quadratur. (English summary) **81f:65028**

Lyness, J. N. (*with* Genz, A. C.) On simplex trapezoidal rule families. **81j:65052**

Mariak, A. The rate of convergence of the method of discrete ordinates in the case of Gaussian quadratures. (Russian. English summary) **81b:65024**

Mikovec', U. A. A property of the areas of tangential trapezoids and approximate calculation of integrals. (Ukrainian. Russian summary) **81a:65036**

Möller, Hans Michael Lower bounds for the number of nodes in cubature formulae. **81j:65053**

Novikov, L. A. *See* **Guk, V. M., 81i:65022**

Ogawa, Shirô (*with* Arioka, Shigekatsu; Kida, Sôsaburô) On orthogonal polynomials in two variables and Gaussian cubature formulas. **81k:65028**

Opfer, Gerhard *See* **Anselone, P. M., 81m:65034**

Paget, D. F. *See* **Elliott, David, 81b:65023**

Pasasovič, V. O. Improvement of an estimate. (Ukrainian. English and Russian summaries) **81d:65011**

Phillips, G. M. Seventh degree integration rules for the sphere. **81k:65029**

Polovinkin, V. I. Convergence of sequences of cubature formulas with a boundary layer on concrete functions. (Russian) **81g:65038**

Richert, Walter R. Gauß-Quadraturformeln mit mehrfachen Knoten. (English summary) **81f:65029**

Salihov, G. N. (*with* Šariphodžaeva, F.) Cubature formulas on the sphere in 5-space that are invariant under the group of the 32-hedron. (Russian) **81m:65040**

Šariphodžaeva, F. *See* **Salihov, G. N., 81m:65040**

Šaripov, R. N. *See* **Gabdulhaev, B. G., 81g:65036**

Šaripov, T. H. Cubature formula with nodes on number-theoretic grids. (Russian) **81g:65039**

(*with* Ahmedov, H. H.) Norm of the error functional of a cubature formula over a space of continuously differentiable functions given on a torus. (Russian) **81g:65040**

Schmid, Hans Joachim On Gaussian cubature formulae of degree $2k-1$. **81c:65015**

Sobolev, S. L. Convergence of cubature formulas on various classes of periodic functions. (Russian) **81g:65041**

Theocaris, P. S. *See* **Tsamasphyros, G. J., 81a:65037**

Tsamasphyros, G. J. (*with* Theocaris, P. S.) Cubature formulas for the evaluation of surface singular integrals. **81a:65037**

Vojtišek, L. V. Construction of cubature formulas with change of step. (Russian) **81m:65041**

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Akopjan, G. G. Sequences of cubature formulas with a cubic lattice for domains with degenerate angles. (Russian) **81c:41065**

Baker, Christopher T. H. Numerical integration in the treatment of integral equations. **81m:65192**

Blaga, Petru P. Quadrature formulas of product type with a high degree of exactness. (Romanian. English summary) **81k:41017**

Coman, Gheorghe On some Hermite-type interpolation formulas with applications to the numerical integration of functions. (Romanian. French summary) **81k:41018**

Engels, Hermann Asymptotische Entwicklungen aller Nullstellen des Legendre Polynoms $L_n(x)$ nach Potenzen von $1/[n(n+1)]$. **81f:65014**

Implizit definierte orthogonale Polynome. (English and Russian summaries) **81f:33011**

Gallone, S. A Gaussian-type quadrature formula and its applications to boundary and interface problems in neutron transport theory. (Italian and Russian summaries) **81g:82081**

Quadrature sums of highest algebraic degree of precision for neutron transport integrals. (Italian and Russian summaries) **81e:82070**

Hamaev, E. A. Cubature formulas for functions determined by a class of pseudodifferential operators. (Russian) **81j:41045**

(Korniičuk, M. P.) *See* **Nikol'skiĭ, S. M., 81g:41034**

Micchelli, Charles A. Some positive Cotes numbers for the Chebyshev weight function. **81k:41021**

Mysovskih, I. P. Invariant cubature formulas. (Russian) **81j:41046**

Nikol'skiĭ, S. M. ★Квадратурные формулы. (Russian) [Quadrature formulae] **81g:41034**

Osicini, Alessandro (*with* Rosati, Francesco) The convergence of hyper-Gaussian functionals. (Italian. French summary) **81a:41046**

Pereverzev, S. V. (*with* Šabozov, M.) On the question of quadrature and cubature formulas that are connected with Hermite splines. (Russian) **81b:41078**

Polovinkin, V. I. Lattice cubature formulas with positive coefficients. (Russian) **81m:41031**

Rasputin, G. G. Cubature formulas and common zeros of orthogonal polynomials. (Russian. English summary) **81b:41080**

Rjabov, V. M. Application of Padé approximations to Laplace transformation inversion. (Russian. English summary) **81c:65064**

Rosati, Francesco *See* **Osicini, Alessandro, 81a:41046**

Šabozov, M. *See* **Pereverzev, S. V., 81b:41078**

Šadimetov, H. M. *See* **Žamalov, Z. Ž., 81b:41025** *and* **Žamalov, Z. Ž., 81j:41049**

Sadyrhanov, R. S. Solution of a class of nonlinear singular integral equations by the quadrature method. (Russian. Azerbaijani and English summaries) **81d:65074**

Schmeisser, Gerhard Two contributions to numerical quadrature. (German summary) **81k:41022**

Schmid, Hans Joachim Interpolatorische Kubaturformeln und reelle Ideale. **81k:41023**

Seatzu, S. On optimal quadrature formulae according to Sard. (Italian. English summary) **81g:41036**

Šoinhurov, C. B. Asymptotically optimal cubature formulas with nodes in a curvilinear lattice. (Russian) **81d:41037**

Asymptotically optimal quadrature and cubature formulas in a finite domain. (Russian) **81b:41081**

Strauss, Hans Optimal quadrature formulas. **81b:41024**

Tošić, Dobrilo Đ. A modification of the Birkhoff-Young quadrature formula for analytical functions. **81j:41047**

Trendafilov, G. St. On some cubature formulas for singular integrals. (Bulgarian. Russian and English summaries) **81j:41048**

Zadiraka, V. K. Quadrature formulae with optimal accuracy for the calculation of the Fourier transform. **81d:41038**

Žamalov, Z. Ž. (*with* Šadimetov, H. M.) Calculation of the coefficients of optimal quadrature formulas. (Russian) **81b:41025**

(*with* Šadimetov, H. M.) Optimal quadrature formulas. (Russian) **81j:41049**

65D99 None of the above, but in this section

Gaffney, P. W. The range of possible values of $f(x)$. **81g:65042**

Hoffman, K. L. (*with* Shier, D. R.) A test problem generator for discrete linear L_1 approximation problems. **81m:65042**

Shier, D. R. *See* **Hoffman, K. L., 81m:65042**

Veltkamp, G. W. Discretization and extrapolation. (Dutch) **81b:65025**

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Gabuzin, V. N. Optimal methods for calculating values of the operator Ux if x is given with an error. Differentiation of functions defined with an error. (Russian) **81k:41012**

v. Golitschek, Manfred Approximation of functions of two variables by the sum of two functions of one variable. **81j:41053**

Meinguet, Jean A convolution approach to multivariate representation formulas. **81c:41076**

Nixon, David Observations on the strained coordinate method for transonic flows. **81b:76039**

Ratschek, H. Centered forms. **81j:65068**

Wetterling, Wolfgang H-Mengen und Minimalbedingungen bei Approximationsproblemen. (English summary) **81f:41032**

65E05 Numerical methods in complex analysis (potential theory, etc.) {For numerical methods in conformal mapping, see 30C30.}

Larkin, F. M. Probabilistic estimation of poles or zeros of functions. **81a:65038**

Pindor, Maciej Padé approximants and rational functions as tools for finding poles and zeros of analytical functions measured experimentally. **81c:65016**

secondary classifications:

Anderson, Dale *See* **Chakravarthy, Sukumar, 81b:30016**

Anger, Gottfried Inverse problems in differential equations. **81j:35105**

Chakravarthy, Sukumar (*with* Anderson, Dale) Numerical conformal mapping. **81b:30016**

Fornberg, Bengt A numerical method for conformal mappings. **81m:30009**

German, S. P. An analogue of the Hermite interpolation formula in domains with a quasiconformal boundary. (Russian) **81j:30059**

Kuhara, Hideo *See* **Murashima, Sadayuki, 81m:65182**

Meleiko, I. N. Approximate calculation of some Cauchy-type integrals. (Russian. English summary) **81g:65025**

Murashima, Sadayuki (*with* Kuhara, Hideo) An approximate method to solve two-dimensional Laplace's equation by means of superposition of Green's functions on a Riemann surface. **81m:65182**

Rosser, J. Barkley An iterative algorithm for calculating potentials near two parallel plates of equal width. II. **81i:78007**

Trefethen, Lloyd N. Numerical computation of the Schwarz-Christoffel transformation. **81g:30012a**

Erratum: "Numerical computation of the Schwarz-Christoffel transformation". **81g:30012b**

Weisel, Jutta Numerische Ermittlung quasikonformer Abbildungen mit finiten Elementen. (English summary) **81j:30086**

White, James W. A nonmapped complex variable method for the computation of unseparated airfoil flows. **81i:76006**

65Fxx Numerical linear algebra

Törnig, Willi ★Numerische Mathematik für Ingenieure und Physiker. Band 1. (German) [Numerical mathematics for engineers and physicists. Vol. 1] **81k:65024**

secondary classifications:

Ptxley, Alden F. ★Applied linear algebra. **81m:15002**

65F05 Direct methods for linear systems and matrix inversion

Abramov, A. A. An elimination method for linear problems. (Russian) **81a:65039**

Anderson, Brian D. O. *See* **Bitmead, Robert R., 81m:65044**

Aspvall, Bengt (*with* Shiloach, Yossi) A fast algorithm for solving systems of linear equations with two variables per equation. **81m:65043**

Bitmead, Robert R. (*with* Anderson, Brian D. O.) Asymptotically fast solution of Toeplitz and related systems of linear equations. **81m:65044**

Chan, W. M. (*with* George, Alan) A linear time implementation of the reverse Cuthill-McKee algorithm. **81f:65030**

Danilov, V. A. The possibility of solving a system of linear algebraic equations with a reduction of order. (Russian) **81i:65024**

Dickinson, Bradley W. Solution of linear equations with rational Toeplitz matrices. **81h:65025**

Duff, Iain S. Recent developments in the solution of large sparse linear equations. **81j:65054**

Evans, David J. On the numerical solution of sparse systems of finite element equations. **81k:65030**

On the solution of certain Toeplitz tridiagonal linear systems. **81k:65031**

George, Alan (*with* Liu, Joseph W. H.) A minimal storage implementation of the minimum degree algorithm. **81g:65043**

See also **Chan, W. M., 81f:65030**

Gergely, József Inversion of sparse matrices. (Hungarian. English summary) **81b:65026**

Matrix inversion and the solution of linear and nonlinear systems by the method of bordering. (Russian) **81d:65012**

Matrix inversion and solution of linear and nonlinear systems by the method of bordering. **81k:65032**

Hüseyin, Özay *See* **Özgüler, Bülent, 81f:65032**

Inouye, Yujiro An algorithm for inverting polynomial matrices. **81b:65027**

Liu, Joseph W. H. *See* **George, Alan, 81g:65043**

Malina, Lubor Transfer methods and conditions for well-conditioning. (Russian) **81f:65031**

Meek, D. S. The inverses of some matrices deviating slightly from a symmetric, tridiagonal, Toeplitz form. **81a:65040**

Özgüler, Bülent (*with* Hüseyin, Özay) On inversion and invertibility of multidimensional polynomial matrices. **81f:65032**

Peters, F. J. ★Sparse matrices and substructures. **81h:65026**

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Shiloach, Yossi *See* **Aspvall, Bengt, 81m:65043**

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65F10 Iterative methods for linear systems [See also 65N20.]

Beauwens, Robert Factorization iterative methods, *M*-operators and *H*-operators. **81e:65014**

Berechet, Adriana The generalized reflection method for linear inequalities. **81k:65033**

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Koljada, Ju. V. (*with* Sigorskiĭ, V. P.) Exponential solution of a system of linear algebraic equations. (Russian) **81g:65044**

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65F15 Eigenvalues, eigenvectors

Anciferov, E. G. The maximum degree of stability of matrices with a given trace. (Russian) **81f:65035**

Aprile, Giuseppe (*with* Raimondi, T.) Search for intermediate eigenvalues, and applications. (Italian) **81b:65031**

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Burov, A. V. On solving the generalized eigenvalue problem $(A-\lambda B)x=0$ by the *QZ*-algorithm. (Russian) **81j:65062**

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(*with* Willoughby, Ralph A.) Computing eigenvectors (and eigenvalues) of large, symmetric matrices using Lanczos tridiagonalization. **81h:65032**

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Luk, Franklin T. Computing the singular-value decomposition on the ILLIAC IV. **81k:65044**

Mote, C. D., Jr. *See* **Schajer, G. S., 81a:65042**

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65F20 Overdetermined systems, pseudoinverses

Abdelmalek, Nabih N. A computer program for the strict Chebyshev solution of overdetermined systems of linear equations. **81e:65019**
Axelsson, Owe Conjugate gradient type methods for unsymmetric and inconsistent systems of linear equations. **81b:65035**
Clark, David I. (*with* Osborne, M. R.) On the implementation of a subset selection algorithm for the restricted least squares problem. **81k:65045**
Deuflhard, P. (*with* Sautter, W.) On rank-deficient pseudoinverses. **81g:65049**
Eldén, Lars Perturbation theory for the least squares problem with linear equality constraints. **81e:65030**
Garey, Lawrence Differences of EPr nonnegative matrices. **81m:65057**
Golub, Gene H. (*with* LeVeque, Randall J.) Extensions and uses of the variable projection algorithm for solving nonlinear least squares problems. **81b:65036**
LeVeque, Randall J. *See* **Golub, Gene H., 81b:65036**
Mifflin, Robert A feasible descent algorithm for linearly constrained least squares problems. **81b:65037**
Osborne, M. R. *See* **Clark, David I., 81k:65045**
Pokorná, Olga On the pseudoinversion of matrix products. **81m:65058**
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Gower, J. C. A modified Leverrier-Faddeev algorithm for matrices with multiple eigenvalues. **(81e:65018)**
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Macokin, A. M. *See* **Kuznecov, Ju. A., (81d:65015)**
Maeß, Gerhard Iterative Lösung linearer Gleichungssysteme. (English summary) **(81j:65058)**
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65F25 Orthogonalization

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65F30 Other matrix algorithms

Albu, Monica A method for computing the minimal L_m solution of systems of linear indeterminate equations. (Romanian. English summary) **81i:65031**
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Garcia, C. B. (*with* Zangwill, W. I.) An approach to homotopy and degree theory. **(81d:55004)**

Georg, Kurt *See* **Allgower, Eugene L., (81d:47040)** *and* **Allgower, Eugene L., (81d:55001)**

Gergely, József Matrix inversion and solution of linear and nonlinear systems by the method of bordering. **(81k:65032)**

Gould, F. J. (*with* Schmidt, C. P.) An existence result for the global Newton method. **(81m:58016)**

Horomskiĭ, B. N. *See* **Židkov, E. P.; et al., (81i:81089)**

Iordache, M. A method of analysis of dc nonlinear networks with controlled sources.

(German and French summaries) **(81i:94023)**

Jansen, R. (*with* Louter, A. S.) An efficient way of programming Eaves' fixed point algorithm. **(81c:90078)**

Kalitkin, N. N. *See* **Ermakov, V. V., (81k:65034)**

Kawai, Tadahiko Some considerations on the finite element method. **(81m:73059)**

Kublanovskaja, V. N. The connection between a spectral problem for linear pencils of matrices and some problems of algebra. (Russian) **(81a:15011)**

Lemke, C. E. A brief survey of complementarity theory. **(81d:90101)**

Louter, A. S. *See* **Jansen, R., (81c:90078)**

Matthies, Hermann *See* **Strang, Gilbert, (81k:73017)**

Miranker, Willard L. Parallel methods for solving equations. **(81d:65024)**

Mittelmann, Hans-Detlef On the efficient solution of nonlinear finite element equations. I. **(81m:65173)**

Moore, Ramon E. Interval methods for nonlinear systems. **(81m:65070)**

Najfeld, Igor (*with* Vitale, Richard A.; Davis, Philip J.) Minkowski iteration of sets. **(81f:52005)**

Nedjalkov, I. P. *See* **Židkov, E. P.; et al., (81i:81089)**

Nguen, M. *See* **Židkov, E. P.; et al., (81i:81089)**

Potra, Florian Alexandru (*with* Pták, Vlastimil) Sharp error bounds for Newton's process. **(81c:65027)**

Pták, Vlastimil *See* **Potra, Florian Alexandru, (81c:65027)**

Ragimov, A. M. On the convergence of an averaged gradient algorithm. (Russian. Azerbaijani and English summaries) **(81h:90130)**

Schmidt, C. P. *See* **Gould, F. J., (81m:58016)**

Schramm, Ruben On the number of solutions of piecewise linear equations. **(81f:15038)**

Sen'o, P. S. *See* **Bartiš, M. Ja., (81b:65055)**

Strang, Gilbert (*with* Matthies, Hermann) Numerical computations in nonlinear mechanics. **(81k:73017)**

Vitale, Richard A. *See* **Najfeld, Igor; et al., (81f:52005)**

Vosko, S. H. *See* **Chow, H. C., (81h:82044)**

Watson, Layne T. A globally convergent algorithm for computing fixed points of C^2 maps. **(81b:55006)**

Wildenauer, P. Auswirkungen von Rundungen und Näherungen bei einer Klasse iterativer Verfahren. (English and Russian summaries) **(81d:65020)**

Yamashita, Hiroshi A continuous path method of optimization and its application to global optimization. **(81h:90133)**

Zangwill, W. I. *See* **Garcia, C. B., (81d:55004)**

Židkov, E. P. (*with* Nguen, M.; Nedjalkov, I. P.; Horomskiĭ, B. N.) Investigation of a class of solutions for Low's equation. (Russian) **(81i:81089)**

65H15 Eigenvalues, eigenvectors

secondary classifications:

Zaharin, F. M. An application of a method of inverse sensitivity. (Russian) **(81m:90098)**

65H99 None of the above, but in this section

Bolotov, V. A. On the calculation of the sum of values of a polynomial in roots of a nonlinear algebraic system of equations. (Russian) **81m:65080**

secondary classifications:

Filicori, Fabio (*with* Monaco, Vito Antonio; Naldi, Carlo) Simulation and design of microwave class-*C* amplifiers through harmonic analysis. **(81g:78039)**

Filus, Lidia Combinatorial fixed-point algorithms. **(81b:55005)**

Forster, Walter Fixed point algorithms and array processors. **(81g:90079)**

Monaco, Vito Antonio *See* **Filicori, Fabio; et al., (81g:78039)**

Naldi, Carlo *See* **Filicori, Fabio; et al., (81g:78039)**

Schäfer, Eugen SOR-Verfahren für nichtlineare Ungleichungssysteme. (English summary) **(81b:65106)**

Solow, Daniel Decomposability in fixed point computation with applications and acceleration techniques. **(81a:55004)**

65Jxx Numerical analysis in abstract spaces

65J05 General

Altman, Mieczysław Iterative methods of contractor directions. **81j:65071**

Deutsch, Frank The alternating method of von Neumann. **81a:65053**

Gončarskiĭ, A. V. (*with* Stepanov, V. V.) The uniform approximation of a solution with bounded variation of ill-posed problems. (Russian) **81b:65047**

Groetsch, C. W. Generalized inverses and generalized splines. **81j:65072**

Imamov, A. Smoothing splines. (Russian) **81b:65048**

Kolata, William (*with* Osborn, John E.) Nonselfadjoint spectral approximation and the finite element method. **81f:65041**

Lebedev, V. I. Zolotarev's problem in the method of variable directions. (Russian) **81g:65065**

Miel, George J. Majorizing sequences and error bounds for iterative methods. **81h:65056**

Osborn, John E. *See* **Kolata, William, 81f:65041**

Potra, Florian Alexandru On an iterative method for solving nonlinear equations in ordered Banach spaces. **81f:65042**

On a modified secant method. **81h:65057**

(*with* Pták, Vlastimil) Sharp error bounds for Newton's process. **81c:65027**

Pták, Vlastimil *See* **Potra, Florian Alexandru, 81c:65027**

Sidorov, N. A. The method of continuation with respect to the parameter in the neighborhood of a branch point. (Russian) **81g:65066**

Stepanov, V. V. *See* **Gončarskiĭ, A. V., 81b:65047**

Tammet, H. F. Two-dimensional indeterminacy of the solution of ill-posed inverse problems. (Russian. English summary) **81d:65025**

Vlasokurov, V. A. Regularizable functions in topological spaces and inverse problems. (Russian) **81g:65067**

Volokitin, S. S. On the optimization of block processes of Newton-Kantorovič. (Russian) **81d:65026**

secondary classifications:

Balázs, Martin (*with* Goldner, G.) On approximate solving by sequences the equations in Banach spaces. **(81f:65043)**

Beauwens, Robert Factorization iterative methods, *M*-operators and *H*-operators. **(81e:65014)**

Bercovier, Michel Approximation of Bingham's variational inequalities by a penalty function for the incompressibility constraint. **(81m:49038)**

Černik, B. P. A generalization of the notion of the weak Čebylev system. (Russian) **(81g:41041)**

Citric'kiĭ, O. E. *See* **Ljaško, I. I.; et al., (81g:93114)**

Descloux, Jean Error bounds for an isolated eigenvalue obtained by the Galerkin method. (German summary) **(81d:65061)**

Didenko, V. P. *See* **Ljaško, I. I.; et al., (81g:93114)**

Dore, Giovanni The Newton-Kantorovič method in locally convex topological vector spaces. (Italian. English summary) **(81h:47055)**

Goldner, G. *See* **Balázs, Martin, (81f:65043)**

Ljaško, I. I. (*with* Didenko, V. P.; Citric'kiĭ, O. E.) ★Фильтрация шумов. (Russian) [Filtering of noise] **(81g:93114)**

Sard, Arthur Integrating terms for inexact differentials. (German summary) **(81g:41045)**

Schlögimann, Wolfgang Spline functions and Gaussian processes (multidimensional case). **(81c:65070)**

Stephan, E. Conform and mixed finite element schemes for the Dirichlet problem for the bi-Laplacian in plane domains with corners. **(81c:65060)**

Ushijima, Teruo Error estimates for the lumped mass approximation of the heat equation. **(81a:65106)**

Vasilenko, V. A. Approximate solution of the problem of continuation of functions by the finite element method. (Russian) **(81j:65040)**

65J10 Equations with linear operators (do not use 65Fxx)

Acker, Felipe (*with* Prestel, Marc-Antoine) Convergence d'un schéma de minimisation alternée. (English summary) **81m:65081**

Agošков, V. I. The method of integral identities. (Russian) **81m:65082**

Alibekov, H. A. (*with* Sobolevskiĭ, P. E.) Stability and convergence of high-order difference schemes of approximation for parabolic equations. (Russian) **81i:65040**

Alifanov, O. M. (*with* Rumjancev, S. V.) Stability of iteration methods for solving linear ill-posed problems. (Russian) **81b:65049**

Ansorge, R. Existence and numerical representation of generalized solutions of nonlinear partial initial value problems. **81m:65083**

Axelsson, Owe A generalized conjugate direction method and its application on a singular perturbation problem. **81i:65041**

Buledza, E. A. Solution of linear equations with an unbounded operator by the multistep method. (Russian) **81g:65068**

Application of multistep iteration methods to the solution of linear differential equations. (Russian) **81k:65057**

Burn, B. J. *See* **Sloan, Ian H.; et al., 81i:65046**

Chatelin-Laborde, Françoise Sur les bornes d'erreur a posteriori pour les éléments propres d'opérateurs linéaires. (English summary) **81d:65027**

D'jakonov, E. G. Solution of systems of equations of the projection-difference method for nonnegative operators. (Russian) **81b:65050**

Domanskiĭ, E. N. Regularizing algorithms whose convergence is equivalent to solvability of certain linear operator equations. (Russian) **81m:65084**

Dreseler, Bernd Symmetrization formulas and norm estimates of projections in multivariate polynomial approximation. **81m:65085**

Džakupov, K. B. Cyclic optimization of iteration processes. (Russian. Kazakh summary) **81m:65086**

Gamidov, V. S. Convergence and stability of the projection method in a separable Fréchet space with a basis. (Russian) **81b:65051**

Garaščuk, I. N. *See* **Prikaščikov, V. G., 81g:65072**

Gukovskiĭ, S. A. Regularization of the construction of a nonsingular solution of a linear equation of the first kind with degeneracy. (Russian) **81i:65042**

Gulin, A. V. The stability of nonselfadjoint difference schemes with respect to starting data. (Russian) **81b:65052**

Igamberdyev, H. Z. (*with* Mannapov, N. N.) Stable reconstruction, in Tihonov's sense, of conductivity operators of dynamical systems. (Russian) **81j:65073**

Jagola, A. G. A generalized principle of the residual in reflexive spaces. (Russian) **81a:65054**

Jurgelas, V. V. *See* **Šablickaja, L. N., 81d:65028**

Kabulov, R. K. Sufficient conditions for the existence of unbounded solutions of a class of equations. (Russian) **81e:65023**

Kaper, Hans G. (*with* Leaf, Gary K.) Improved error estimates for the perturbed Galerkin method applied to a class of generalized eigenvalue problems. **81j:65074**

Koršunov, V. A. *See* **Tanana, V. P.; et al., 81g:65074** *and* **Tanana, V. P., 81g:65075**

Krabs, W. Optimal error estimates for linear operator equations. **81g:65069**

Langford, W. F. The generalized inverse of an unbounded linear operator with unbounded constraints. **81g:65070**

Leaf, Gary K. *See* **Kaper, Hans G., 81j:65074**

Loginov, B. V. (*with* Rahimov, D. G.) The method of false perturbations in the presence of generalized Jordan chains. (Russian) **81g:65071**

Lučka, A. Ju. An approximation-iteration method. (Russian) **81i:65043**

Mannapov, N. N. *See* **Igamberdyev, H. Z., 81j:65073**

Medins'kiĭ, I. P. A method for solving linear equations with functional derivatives. (Russian) **81i:65044**

Meleško, V. I. Statistical estimation on the basis of *Lg*-pseudoinverse operators.

(Russian) **81i:65045**

Milanowicz, J. P. A generalization of the Stein-Rosenberg theorem to Banach spaces. **81m:65087**

Moszyński, Krzysztof Projection methods in the approximate solution of the eigenvalue problem in a Hilbert space. **81m:65088**

Nazimov, A. B. Rate of convergence of the regularization method. (Russian. Tajiki summary) **81k:65058**

Noussair, Ezzat S. *See* **Sloan, Ian H.; et al., 81i:65046**

Pljaškevič, V. Ju. Solution of operator equations by the Kantorovič method. (Russian) **81j:65075**

Prestel, Marc-Antoine *See* **Acker, Felipe, 81m:65081**

Prikazčikov, V. G. (*with* Garaščuk, I. N.) A three-layer iteration scheme for computing the minimal eigenvalue. (Russian) **81g:65072**

The modified method of steepest descent for calculation of eigenvalues. (Russian) **81b:65053**

Rahimov, D. G. *See* **Loginov, B. V., 81g:65071**

Rekant, M. A. Optimality of A. B. Bakušinskiĭ's method in the solution of ill-posed problems with an approximately given operator. (Russian) **81m:65089**

Rumjancev, S. V. *See* **Alifanov, O. M., 81b:65049**

Šablickaja, L. N. (*with* Jurgelas, V. V.) A remark on the stability of the Abramov-Gaipova iteration process. (Russian) **81d:65028**

Samarskiĭ, A. A. Some results of the theory of difference methods. (Russian) **81k:65059**

Seidman, Thomas I. Nonconvergence results for the application of least-squares estimation to ill-posed problems. **81g:65073**

Sizikov, V. S. *See* **Verlan', A. F., 81b:65054**

Sloan, Ian H. (*with* Noussair, Ezzat S.; Burn, B. J.) Projection methods for equations of the second kind. **81i:65046**

Sobolevskiĭ, P. E. *See* **Alibekov, H. A., 81i:65040**

Štarkman, A. A. *See* **Tanana, V. P.; et al., 81g:65074**

Stummel, Friedrich Basic compactness properties of nonconforming and hybrid finite element spaces. (French summary) **81h:65058**

Tanana, V. P. (*with* Koršunov, V. A.; Štarkman, A. A.) The principle of minimal residuals in the solution of ill-posed problems. (Russian) **81g:65074**

Optimal methods for solving ill-posed problems with supplementary information and their application to the solution of the γ-probing of boreholes. (Russian) **81m:65090**

(*with* Koršunov, V. A.) Selection of the regularization parameter in the solution of ill-posed problems. (Russian) **81g:65075**

Verlan', A. F. (*with* Sizikov, V. S.) The standard example method for determining the regularization parameter in the Lavrent'ev and Tihonov methods. (Russian. English summary) **81b:65054**

Winther, Ragnar Some superlinear convergence results for the conjugate gradient method. **81h:65060**

Zlepko, P. P. Some projection-iteration methods for the approximation construction of implicit functions. (Russian. English summary) **81g:65076**

secondary classifications:

Aliev, B. Iteration methods for an equation of the second kind on the spectrum. (Russian. Tajiki summary) **(81b:47012)**

Brenner, Philip (*with* Thomée, Vidar) On rational approximations of groups of operators. **(81m:47056)**

Domanskiĭ, E. N. The choice of the regularization parameter in the solution of ill-posed problems. (Russian) **(81b:47013)**

Džumaev, S. Uniqueness of the normal pseudosolution of operator equations, and convergence theorems. (Russian) **(81h:47010)**

Fichera, Gaetano ★Numerical and quantitative analysis. **(81a:65005)**

Can we find out the topological shape of a planet from its atlas? **(81m:58023)**

Glasko, V. B. *See* **Tihonov, A. N.; et al., (81c:65024)**

Godlewski, E. (*with* Puech-Raoult, A.) Équations d'évolution linéaires du second ordre et méthodes multipas. (English summary) **(81d:65035)**

(Graffi, Sandro) *See* **Fichera, Gaetano, (81a:65005)**

Greenlee, W. M. ★Approximation of eigenvalues by variational methods. **(81d:49027)**

Gulin, A. V. Stability criteria for certain nonselfadjoint three-layer difference schemes. (Russian) **(81i:39004)**

Hennagin, Stephen C. (*with* Linz, Peter) Exclusion regions for eigenvalues of linear operators. **(81d:49028)**

Hužanov, U. *See* **Muhidinov, N. M.; et al., (81f:65075)**

Ivanov, V. V. (*with* Kotenkova, G. N.) Optimization of algorithms for the solution of particular integral equations with respect to their realization time on a computer. (Russian) **(81k:65146)**

Kotenkova, G. N. *See* **Ivanov, V. V., (81k:65146)**

Kovács, Margit Regularization of ill-posed extremal problems with the use of the barrier function method. (Russian. English summary) **(81a:65061)**

Kriksin, Ju. A. *See* **Tihonov, A. N.; et al., (81c:65024)**

Linden, Hansjörg Schranken für Eigenwerte nichtlinearer Eigenwertaufgaben. (English summary) **(81c:47015)**

Linz, Peter *See* **Hennagin, Stephen C., (81d:49028)**

Menikes, L. D. Conditions for linear and finite-dimensional linear regularizability. (Russian) **(81b:47014)**

Miel, George J. Cones and error bounds for linear iterations. **(81i:47040)**

Moszyński, Krzysztof A general scheme for obtaining estimates for interior approximation of certain operators in Banach spaces. (Polish) **(81a:47014)**

Muhidinov, N. M. (*with* Sadykov, M. K.; Hužanov, U.) Formalization on a computer of the theory of stability of difference schemes. (Russian) **(81f:65075)**

Puech-Raoult, A. *See* **Godlewski, E., (81d:65035)**

Rappaz, J. Approximation du spectre d'un opérateur non compact. **(81d:49029)**

Raspopova, N. S. Regularizing algorithms. (Russian) **(81b:47015)**

Sadykov, M. K. *See* **Muhidinov, N. M.; et al., (81f:65075)**

Thomée, Vidar *See* **Brenner, Philip, (81m:47056)**

Tihonov, A. N. (*with* Glasko, V. B.; Kriksin, Ju. A.) On the question of quasi-optimal choice of a regularized approximation. (Russian) **(81c:65024)**

Tippenhauer, Ulrich Approximation von Operatorgleichungen mit Reprokernen. (English summary) **(81d:47007)**

65J15 Equations with nonlinear operators (do not use 65Hxx)

Alefeld, Götz Monotone Regula-falsi-ähnliche Verfahren bei nichtkonvexen Operatorgleichungen. **81k:65061**

Anselone, P. M. (*with* Ansorge, R.) Compactness principles in nonlinear operator approximation theory. **81a:65055**

Ansorge, R. *See* **Anselone, P. M., 81a:65055**

Aširov, S. A. *See* **Mamedov, Ja. D., 81k:65068**

Balázs, Martin (*with* Goldner, G.) On approximate solving by sequences the equations in Banach spaces. **81f:65043**

On convergent sequences of second order with respect to a mapping. **81m:65091**

(*with* Muntean, Ioan) A unification of Newton's methods for solving equations. **81k:65062**

Bartiš, M. Ja. (*with* Sen'o, P. S.) Recursive iteration processes of Runge type. (Russian. English summary) **81b:65055**

Bazley, Norman W. Global convergence of Faedo-Galerkin approximations to nonlinear wave equations. **81h:65059**

Bel'tjukov, B. A. (*with* Nikulin, V. L.) A two-parameter iteration process for the solution of nonlinear operator equations. (Russian) **81k:65063**

Čečkin, A. V. Multiparametric regularization of ill-posed problems. (Russian) **81k:65064**

Černjak, V. Ja. On an investigation of the convergence of an iteration process with disparate arguments. (Russian) **81j:65076**

Decker, Dwight W. (*with* Kelley, C. T.) Newton's method at singular points. I. **81k:65065a**

(*with* Kelley, C. T.) Newton's method at singular points. II. **81k:65065b**

Fedotov, A. M. Unbiased statistical solutions of operator equations. (Russian) **81m:65092**

Goldner, G. *See* **Balázs, Martin, 81f:65043**

Groze, Sever The method of chords for solving operator equations dependent on one parameter. **81m:65093**

Jagola, A. G. Solving nonlinear ill-posed problems using the generalized residual method. (Russian) **81m:65094**

Kelley, C. T. *See* **Decker, Dwight W., 81k:65065a** *and* **Decker, Dwight W., 81k:65065b**

Krawczyk, Rudolf (*with* Selsmark, Flemming) Order-convergence and iterative interval methods. **81e:65024**

Kurčatov, V. A. Approximate solution of functional equations with nondifferentiable operators by the linearization method. I. (Russian) **81c:65028**

The method of linearized residuals for accelerating the convergence of an iteration method. (Russian) **81k:65066**

Lapin, A. V. Local correctness of a class of nonlinear operator-difference schemes. (Russian) **81k:65067**

Leonov, A. S. Algorithms for the approximate solution of nonlinear ill-posed problems with a perturbed operator. (Russian) **81b:65056**

Liskovec, O. A. A projection method for realizing the method of the residual for nonlinear equations of the first kind with a perturbed operator. (Russian) **81h:65061**

Mamedov, Ja. D. (*with* Aširov, S. A.) ★Методы последовательных приближений для решения операторных уравнений. (Russian) [Methods of successive approximations for solving operator equations] **81k:65068**

Miel, George J. Unified error analysis for Newton-type methods. **81m:65095**

Moore, Gerald (*with* Spence, Alastair) The calculation of turning points of nonlinear equations. **81i:65047**

Muntean, Ioan *See* **Balázs, Martin, 81k:65062**

Nikulin, V. L. *See* **Bel'tjukov, B. A., 81k:65063**

Portnov, V. R. Solvability of nonlinear operator equations. (Russian) **81f:65044**

Potra, Florian Alexandru (*with* Pták, Vlastimil) On a class of modified Newton processes. **81m:65096**

Pták, Vlastimil A rate of convergence. **81f:65045**

See also **Potra, Florian Alexandru, 81m:65096**

Pyhteev, G. N. A case of convergence of the iteration method and its applications in the theory of jets. (Russian. Tajiki summary) **81k:65069**

Raizman, Aleksandr On a modification of Čebyšev's method. (Russian. Lithuanian and English summaries) **81b:65057**

Reinhardt, Hans-Jürgen On asymptotic expansions in nonlinear operator equations with applications to singular perturbation problems. **81i:65048**

Rjazanceva, I. P. Regularization of equations with accretive operators by the method of successive approximations. (Russian) **81d:65029**

Schneider, Klaus R. Asymptotisch optimale Fehlerschranken für eine Klasse von Newton-like-Verfahren. **81m:65097**

Selsmark, Flemming *See* **Krawczyk, Rudolf, 81e:65024**

Sen'o, P. S. Application of the majorant principle to Runge type iteration methods. (Ukrainian. Russian summary) **81b:65058**

See also **Bartiš, M. Ja., 81b:65055**

Solomickiĭ, N. I. A modified Newton-Kantorovič method for the approximate solution of nonlinear operator equations in locally convex spaces. (Russian) **81b:65059**

Spence, Alastair *See* **Moore, Gerald, 81i:65047**

Sprekels, Jürgen Iterationsverfahren zur Einschließung positiver Lösungen superlinearer Integralgleichungen. (English summary) **81e:65025**

Exact bounds for the solution branches of nonlinear eigenvalue problems. **81i:65049**

Viktorov, E. D. Convergence of a procedure for calculating an approximate solution in the extended Kantorovič method. (Russian) **81b:65060**

Volokitin, S. S. Investigation of the convergence of block modifications of the Newton-Kantorovič method. (Russian) **81i:65050**

Zhang, Shang Tai A classical problem of numerical mathematics. (Chinese. English summary) **81h:65061**

secondary classifications:

Dunlin, A. R. β-stability of A. N. Tihonov's regularization method for solving implicit operator equations of the first kind. (Russian) **(81b:47077)**

Decker, Dwight W. (*with* Keller, Herbert B.) Solution branching—a constructive technique. **(81j:58029)**

Frank, Léonid S. Difference singular perturbations. I. A priori estimates. **(81g:65129)**

Gaponenko, Ju. L. A condition for solvability of nonlinear operator equations. (Russian) **(81m:47086)**

Glashoff, Klaus (*with* Werner, Bodo) Inverse monotonicity of monotone L-operators with applications to quasilinear and free boundary value problems. **(81c:47052)**

Keller, Herbert B. Numerical solution of bifurcation problems in nonlinear eigenvalue problems. (Russian) **(81d:47039)**

See also **Decker, Dwight W., (81j:58029)**

Kratochvíl, Alexander (*with* Nečas, Jindřich) Gradient methods for the construction of Ljusternik-Schnirelmann critical values. (French summary) **(81i:58019)**

Kurčenko, T. S. The convergence of nonstationary projection-iteration variants of the basic and "refined" Newton-Kantorovič methods for solving nonlinear operator equations. (Russian) **(81h:47056)**

Larrecq, M. *See* **Saguez, C., (81i:80007)**

Lions, Pierre-Louis (*with* Mercier, B.) Splitting algorithms for the sum of two nonlinear operators. **(81g:47070)**

Liskovec, O. A. A projection method of determining quasisolutions for equations of the first kind with a perturbed operator. (Russian) **(81i:47064)**

Meleško, V. I. Iterative perturbed pseudoinverse operator methods for calculation of general solutions of nonlinear equations. (Russian) **(81j:47057)**

Mercier, B. *See* **Lions, Pierre-Louis, (81g:47070)**

Mildia, P. A study of the convergence of approximate methods for finding self-oscillations by means of rotations of the vector field. (Russian. English summary) **(81j:34074)**

Mooney, J. W. (*with* Voss, Heinrich; Werner, Bodo) The dependence of critical parameter bounds on the monotonicity of a Newton sequence. **(81c:35049)**

Nečas, Jindřich *See* **Kratochvíl, Alexander, (81i:58019)**

Potra, Florian Alexandru On an iterative method for solving nonlinear equations in ordered Banach spaces. **(81f:65042)**

Rastrenin, V. A. Approximation of equations in Banach space with a nonlinear multivalued operator. (Russian) **(81b:34057)**

Saguez, C. (*with* Larrecq, M.) Contrôle de systèmes à frontière libre. Application à la coulée continue d'acier. **(81i:80007)**

Shapiro, Victor L. Saddle points and Ritz-Galerkin approximations. **(81f:26015)**

Voss, Heinrich *See* **Mooney, J. W.; et al., (81c:35049)**

Wantula, Bolesław P. Round-off errors in iteration processes. (Polish. Russian and English summaries) **(81b:65039)**

Werner, Bodo *See* **Mooney, J. W.; et al., (81c:35049)** *and* **Glashoff, Klaus, (81c:47052)**

65J99 None of the above, but in this section

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Kelsey, Donald R. Orbital topology. I. A basic topological model for chemical systems, an orbital mapping technique, and analyses of model, thermal electrocyclic reactions. **(81j:80007a)**

Orbital topology. II. Orbital mapping of unsymmetrical molecules. A survey of the thermal isomerizations of Dewar isomers of isoelectronically substituted benzenes, cyclopentadienes, and cyclopentadienyl ions. **(81j:80007b)**

Marek, Ivo Homogenization in problems with oscillating data. **(81k:46077)**

Neta, Beny On determination of best-possible constants in integral inequalities involving derivatives. **(81m:26014)**

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Weihrauch, Klaus (*with* Schreiber, Ulrich) Metric spaces defined by weighted algebraic cpo-s. **(81e:68055)**

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Numerical methods in the dynamics of rarefied gases ★Численные методы в динамике разреженных газов. Вып. 4. (Russian) [Numerical methods in the dynamics of rarefied gases. No. 4] **(81i:76028a)**

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(*with* Ojika, Takeo) Multipoint boundary value problems with discontinuities. II. Convergence of the initial value adjusting method. **81j:65097**

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Chawla, M. M. (*with* Katti, C. P.) On Noumerov's method for computing eigenvalues. **(81f:65064)**

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Gladwell, Ian On the numerical solution of a differential nonlinear eigenvalue problem on an infinite range. **81h:65088**
de Hoog, Frank R. *See* **Paine, John, 81a:65085**
Karadiov, D. *See* **Aleksandrov, L., 81k:65096**
Katti, C. P. *See* **Chawla, M. M., 81f:65064**
Klein, Peter P. Zur Einschließung des betragskleinsten Eigenwertes bei Eigenwertaufgaben mit gewöhnlichen Differentialgleichungen vierter Ordnung. (English summary) **81b:65076**
Lužnih, V. M. *See* **Makarov, V. L.; et al., 81k:65098**
Makarov, V. L. (*with* Gavriljuk, I. P.; Lužnih, V. M.) Exact and truncated difference schemes for a class of Sturm-Liouville problems with degeneration. (Russian) **81k:65098**
Martinelli, Maria Renata The error in the approximate solution of eigenvalue problems for ordinary differential equations. (Italian. English summary) **81g:65116**
Paine, John (*with* de Hoog, Frank R.) Uniform estimation of the eigenvalues of Sturm-Liouville problems. **81a:65085**
Risken, H. (*with* Vollmer, H. D.) Solutions and applications of tridiagonal vector recurrence relations. **81k:65099**
Swartz, Blair *See* **de Boor, Carl, 81k:65097**
Vollmer, H. D. *See* **Risken, H., 81k:65099**
Weber, Helmut Numerische Behandlung von Verzweigungsproblemen bei gewöhnlichen Randwertaufgaben. (English summary) **81c:65042**
Westreich, David Numerical solution of the eigenvalue problem for discontinuous linear ordinary differential equations. **81h:65089**

secondary classifications:

Adam, Gh. A global numerical solution of the radial Schrödinger equation by second-order perturbation theory. (French summary) **(81g:81006)**
(*with* Adam, S.; Corciovei, A.) Local and accumulated truncation errors in a class of perturbative numerical methods. (French summary) **(81g:81007)**
Adam, S. *See* **Adam, Gh.; et al., (81g:81007)**
Barcza, S. Restricted quantum-mechanical three-body problems. I. One moving electron in the field of two Coulombic ions which are fixed in space. **(81e:81174)**
Bohl, Erich Chord techniques and Newton's method for discrete bifurcation problems. **(81c:65022)**
Corciovei, A. *See* **Adam, Gh.; et al., (81g:81007)**
Garaščuk, I. N. *See* **Prikazčikov, V. G., (81g:65072)**
Hajj, F. Y. Eigenvalues of any parameter in the Schrödinger radial equation. **(81m:81013)**
Havlíček, Miloslav *See* **Úlehla, Ivan, (81k:81021)**
Prikazčikov, V. G. (*with* Garaščuk, I. N.) A three-layer iteration scheme for computing the minimal eigenvalue. (Russian) **(81g:65072)**
Rakimov, D. G. The method of false perturbations for the approximating operator-function in eigenvalue problems for ordinary differential equations. (Russian) **(81a:34028)**
Úlehla, Ivan (*with* Havlíček, Miloslav) New method for computation of discrete spectrum. (Czech summary) **(81k:81021)**

65L20 Stability of numerical methods

Bulgakov, A. Ja. (*with* Godunov, S. K.) Quality of the stability of systems of linear differential equations with constant coefficients and its numerical estimation. (Russian) **81m:65144**
Calvo, Manuel (*with* Lisbona, F. J.) On the concept of stability in step-by-step methods. (Spanish) **81f:65067**
Day, J. D. On the internal S-stability of Rosenbrock methods. **81k:65100**
Friedli, A. (*with* Jeltsch, R.) An algebraic test for A_0-stability. **81k:65101**
Godunov, S. K. *See* **Bulgakov, A. Ja., 81m:65144**
Jeltsch, R. *See* **Friedli, A., 81k:65101**
Lisbona, F. J. *See* **Calvo, Manuel, 81f:65067**
Reinhardt, Hans-Jürgen Singular perturbations of difference methods for linear ordinary differential equations. **81d:65049**
Sanz Serna, J. M. Some aspects of the boundary locus method. **81m:65145**

secondary classifications:

Bykov, A. A. A stable numerical method for the solution of boundary value problems for systems of linear ordinary differential equations. (Russian) **(81f:65058)**
Manneville, Paul *See* **Pomeau, Yves, (81g:58024)**
Pagliari, Carmen A fourth-order method for the numerical integration of a second-order ordinary differential equation. (Italian) **(81j:65081)**
Pomeau, Yves (*with* Manneville, Paul) Intermittent transition to turbulence in dissipative dynamical systems. **(81g:58024)**
Stokes, Arnold P. Comparison theorems and instability with applications to numerical integration, satellite orbits and averaging. **(81h:65020)**

65L50 Mesh generation and refinement

65L60 Finite elements, Rayleigh-Ritz and Galerkin methods, finite methods

65L99 None of the above, but in this section

Beljustina, L. N. Investigation of some second-order nonlinear nonautonomous systems by qualitative-numerical methods. (Russian) **81h:65090**
Burke, Edward A. Extended Numerov method for the numerical solution of the Hartree-Fock equations. **81h:65091**
Cash, J. R. ★Stable recursions. **81j:65099**
Chudnovsky, Gregory V. Approximations de Padé explicites pour les solutions des équations différentielles linéaires fuchsiennes. (English summary) **81a:65086**
Destuynder, Philippe A direct three-dimensional approach for linear plate by Naghdi's method. **81b:65077**
Falk, Richard S. Error estimates for the approximate identification of a constant coefficient from boundary flux data. **81b:65068**
Fil'čakova, V. P. An approximate method of solving second-order nonlinear differential equations of a polynomial class. (Russian) **81m:65146**
Flaherty, Joseph E. (*with* O'Malley, Robert E., Jr.) The numerical solution of singular singularly-perturbed initial value problems. **81d:65050**
Hadeler, K. P. Effective computation of periodic orbits and bifurcation diagrams in delay equations. **81g:65117**
Kreiss, Heinz-Otto Problems with different time scales for ordinary differential equations. **81a:65087**
Kubíček, Milan Algorithm for evaluation of complex bifurcation points in ordinary differential equations. **81c:65043**
Lambert, J. D. (*with* McLeod, R. J. Y.) Numerical methods for phase-plane problems in ordinary differential equations. **81h:65092**
McLeod, R. J. Y. *See* **Lambert, J. D., 81h:65092**
Meičerjakov, Ju. P. On the question of constructing difference grids by the geometric method. (Russian) **81h:65093**
Necula, Maria-Ana (*with* Tănăsescu, Cristian) Algorithms for determining LODECC which has a given time function as solution. (Romanian summary) **81b:65078**
Oelschlägel, Dieter (*with* Wörfel, Friedhard) Lineare Mehrschrittverfahren zur Lösung impliziter Differentialgleichungssysteme 1. Ordnung. **81g:65118**
Olson, David E. Deterministic systems modeling: tensor product model approximation to continuous systems. **81m:65147**
O'Malley, Robert E., Jr. *See* **Flaherty, Joseph E., 81d:65050**
Sun, Tze Chien A finite element method for random differential equations with random coefficients. **81e:65054**
Tănăsescu, Cristian *See* **Necula, Maria-Ana, 81b:65078**
Wörfel, Friedhard *See* **Oelschlägel, Dieter, 81g:65118**
Yamamoto, Norio An error analysis of Galerkin approximations of periodic solution and its period to autonomous differential system. **81d:65051**

secondary classifications:

Al-Bayaty, A. R. *See* **Mohan, C., (81k:85006)**
Bragar', L. F. Numerical experiments in the study of the translational-rotational motion of small planets. (Russian) **(81f:70011)**
Curry, J. H. On some systems motivated by the Lorenz equations: numerical results. **(81k:58044)**
Dankanič, V. A. *See* **Mitropol'skiĭ, Ju. A.; et al., (81j:34124)**
Dmitriev, M. G. *See* **Glizer, V. Ja., (81b:93043)**
Fujisaka, Hirokazu *See* **Mori, Hazime, (81k:58047)**
Gabdulhaev, B. G. Optimization of collocation methods for solving integral and differential equations. (Russian) **(81k:65144)**
Glizer, V. Ja. (*with* Dmitriev, M. G.) Asymptotic behavior of the solution of certain discrete problems of optimal control with a small step. (Russian) **(81b:93043)**
Gončarenko, A. A. *See* **Ponomarëv, V. I., (*See* 80d:00013)**
Kriebel, Horst W. COOP, a program for comprehensive optimization of solutions of ordinary differential equations by conjugate gradient descent. (*See* **81j:93004**)
Mambriani, Antonio (*with* Mambriani, Giuseppe) Restricted deralgebra: first step towards a new "functional analysis". II. (Italian) **(81j:44009)**
Mambriani, Giuseppe *See* **Mambriani, Antonio, (81j:44009)**
Martinjuk, D. Ĭ. *See* **Mitropol'skiĭ, Ju. A.; et al., (81j:34124)**
Mitropol'skiĭ, Ju. A. (*with* Martinjuk, D. Ĭ.; Dankanič, V. A.) Galerkin's method in the theory of quasiperiodic solutions of nonlinear differential equations with lag. (Russian) **(81j:34124)**
Mohan, C. (*with* Al-Bayaty, A. R.) Power-series solutions of the Lane-Emden equation. **(81k:85006)**
Mori, Hazime (*with* Fujisaka, Hirokazu) Statistical dynamics of chaotic flows. **(81k:58047)**
Ponomarëv, V. I. (*with* Gončarenko, A. A.) Stochastic stability of solutions of a class of nonlinear inverse problems. (Russian) (*See* **80d:00013**)
Robbins, K. A. Periodic solutions and bifurcation structure at high R in the Lorenz model. **(81a:58036)**
Roberts, S. M. Reduction and the Kagiwada-Kalaba method of invariant imbedding. **(81c:34010)**
Smerека, Ĭ. P. Reduction in the mean square of a system of first-order essentially nonlinear equations to the standard form. (Russian) **(81g:34044)**
Wendt, Werner Über eine eindimensionale lineare Integro-Differentialgleichung und deren approximative Lösung mit dem Differenzenverfahren. (Russian, English and French summaries) **(81k:45016)**
Zamkovaja, L. D. On a method of "freezing" for discrete systems. (Russian) **(81f:39006)**

65Mxx Partial differential equations, initial value problems

65M05 Derivation of finite difference approximations

Ansorge, R. Equivalence theorems for discretized partial initial value problems. **81d:65052b**
Survey of equivalence theorems in the theory of difference approximations for partial initial value problems. **81d:65052a**
Aziz, A. K. (*with* Schneider, Manfred; Werschulz, Arthur G.) A finite element method for the Tricomi problem. **81i:65069**
Baker, Garth A. (*with* Dougalis, Vassilios A.; Serbin, Steven M.) High order accurate two-step approximations for hyperbolic equations. (French summary) **81c:65044**

Crandall, Michael G. (*with* Majda, Andrew) Monotone difference approximations for scalar conservation laws. **81b:65079**
Dougalis, Vassilios A. *See* **Baker, Garth A.; et al., 81c:65044**
van der Houwen, P. J. *See* **Kok, J.; et al., 81d:65053**
Knorr, Georg (*with* Mond, Michael) The representation of shock-like solutions in an Eulerian mesh. **81m:65148**
Kok, J. (*with* van der Houwen, P. J.; Wolkenfelt, P. H. M.) ★A semidiscretization algorithm for two-dimensional partial differential equations. **81d:65053**
Majda, Andrew *See* **Crandall, Michael G., 81b:65079**
Makarov, V. L. (*with* Sa″dullaev, S. S.) Four-point difference scheme for the Goursat problem. (Russian. English summary) **81m:65149**
Mond, Michael *See* **Knorr, Georg, 81m:65148**
Oliger, Joseph Constructing stable difference methods for hyperbolic equations. **81k:65102**
Pala, M. M. (*with* Spano, P.) A cubic spline technique for a fourth-order hyperbolic-parabolic mixed problem. (Italian) **81a:65088**
Sa″dullaev, S. S. *See* **Makarov, V. L., 81m:65149**
Schneider, Manfred *See* **Aziz, A. K.; et al., 81i:65069**
Serbin, Steven M. *See* **Baker, Garth A.; et al., 81c:65044**
Šokin, Ju. I. (*with* Urusov, A. I.) Difference schemes in spaces of generalized functions and their differential representations. (Russian) **81a:65089**
Spano, P. *See* **Pala, M. M., 81a:65088**
Urusov, A. I. *See* **Šokin, Ju. I., 81a:65089**
Werschulz, Arthur G. *See* **Aziz, A. K.; et al., 81i:65069**
Wolkenfelt, P. H. M. *See* **Kok, J.; et al., 81d:65053**

secondary classifications:

Coats, K. H. Reservoir simulation: a general model formulation and associated physical/numerical sources of instability. **(81m:76052)**
Davies, Huw C. A pseudo-upstream differencing scheme for advection. **(81j:76018)**
Engquist, Björn (*with* Osher, Stanley) Stable and entropy satisfying approximations for transonic flow calculations. **(81b:65082)**
(*with* Smedsaas, Tom) Automatic computer code generation for hyperbolic and parabolic differential equations. **(81k:65003)**
Favorskiĭ, A. P. Variational-discrete models of hydrodynamics equations. (Russian) **(81j:76024)**
Gamby, D. (*with* Lamy, R.) Numerical implementation of the "summed progressing wave" formalism. Computation of short-time and long-time transients. **(81i:65106)**
Glimm, James G. (*with* Marchesin, Dan; McBryan, O.) Subgrid resolution of fluid discontinuities. II. **(81k:76041)**
Hirt, C. W. Simplified solution algorithms for fluid flow problems. **(81a:76018)**
Iguchi, Masakazu *See* **Shimosaka, Haruo, (81d:70018)**
Kaniel, Shmuel Approximation of the hydrodynamic equations by a transport process. **(81d:76073)**
Kuz′min, A. V. (*with* Makarov, V. L.; Meladze, G. V.) Completely conservative three-layer difference schemes for gas dynamics equations in Euler variables. (Russian. Georgian and English summaries) **(81j:76067)**
Lamy, R. *See* **Gamby, D., (81i:65106)**
Love, M. D. Subgrid modelling studies with Burgers' equation. **(81j:76032)**
Makarov, V. L. *See* **Kuz′min, A. V.; et al., (81j:76067)**
Marchesin, Dan *See* **Glimm, James G.; et al., (81k:76041)**
McBryan, O. *See* **Glimm, James G.; et al., (81k:76041)**
Meladze, G. V. *See* **Kuz′min, A. V.; et al., (81j:76067)**
Orîşanu, Mircea An application of the finite difference equation method. **(81d:76090)**
Osher, Stanley *See* **Engquist, Björn, (81b:65082)**
Shimosaka, Haruo (*with* Iguchi, Masakazu) Motions of a stretched string under a moving load. **(81d:70018)**
Smarr, Larry L. Basic concepts in finite differencing of partial differential equations. (*See* **81j:83017**)
Smedsaas, Tom *See* **Engquist, Björn, (81k:65003)**
Thacker, W. C. A geodesic finite-difference method for curved domains: simulations of tidal motion on a sphere. **(81h:86005)**
Yorke, H. W. Numerical solution of the equation of radiation transfer in spherical geometry. **(81e:85011)**

65M10 Stability and convergence of difference methods

Alibekov, H. A. (*with* Sobolevskiĭ, P. E.) Stability and convergence of difference schemes of a high order of approximation for parabolic partial differential equations. (Russian) **81j:65100**
Axelsson, Owe (*with* Gustafsson, Ivar) On the use of preconditioned conjugate gradient methods for red-black ordered five-point difference schemes. **81g:65119**
Bauch, Hartmut Zur iterativen Lösung von charakteristischen Anfangswertproblemen mit hyperbolischer Differentialgleichung $Z_{xy} = f(x, t, z)$ mittels Intervallmethoden. **81i:65070**
Berger, Alan E. (*with* Brézis, Haïm; Rogers, Joel C. W.) A numerical method for solving the problem $u_t - \Delta f(u) = 0$. (French summary) **81g:65120**
Bermúdez de Castro López, A. Two algorithms for the numerical solution of a quasilinear parabolic equation. (Spanish) **81i:65071**
Bezdetnyĭ, B. P. (*with* Gluščenko, A. A.; Dovgiĭ, B. P.) Approximate solution of some systems of nonlinear hyperbolic equations. (Russian. English summary) **81f:65065**
Bokov, A. G. Energy inequalities for certain three-layer difference schemes on nets that change in time. (Russian) **81h:65094**
Brézis, Haïm *See* **Berger, Alan E.; et al., 81g:65120**
Carey, G. F. An analysis of stability and oscillations in convection-diffusion computations. **81i:65072**
(*with* Sepehrnoori, K.) Gershgorin theory for stiffness and stability of evolution systems and convection-diffusion. **81d:65054**
Chin, R. C. Y. (*with* Hedstrom, G. W.; Karlsson, K. E.) A simplified Galerkin method for hyperbolic equations. **81b:65080**
Crandall, Michael G. (*with* Majda, Andrew) The method of fractional steps for conservation laws. **81j:65101**
Dougalis, Vassilios A. Multistep-Galerkin methods for hyperbolic equations. **81b:65081**
Dovgiĭ, B. P. *See* **Bezdetnyĭ, B. P.; et al., 81f:65065**
Engquist, Björn (*with* Osher, Stanley) Stable and entropy satisfying approximations for transonic flow calculations. **81b:65082**
Gluščenko, A. A. *See* **Bezdetnyĭ, B. P.; et al., 81f:65065**
Gulin, A. V. Stability of difference schemes and operator inequalities. (Russian) **81k:65103**
Gustafsson, Ivar *See* **Axelsson, Owe, 81g:65119**
Hedstrom, G. W. *See* **Chin, R. C. Y.; et al., 81b:65080**
Karlsen, Lasse K. Computation of steady shocks by second-order finite-difference schemes. **81j:65102**
Karlsson, K. E. *See* **Chin, R. C. Y.; et al., 81b:65080**
Krupnov, Ju. P. Three-layered difference schemes for multidimensional problems. (Russian. English summary) **81k:65104**
Majda, Andrew *See* **Crandall, Michael G., 81j:65101**
Molodyh, V. N. A method of constructing iteration schemes for hyperbolic systems of equations. (Russian) **81h:65095**
Nicorovici-Porumbaru, D. Numerical integration of differential equations. **81m:65150**
Osher, Stanley *See* **Engquist, Björn, 81b:65082**
Pasciak, Joseph E. Spectral and pseudospectral methods for advection equations. **81i:65073**
Rogers, Joel C. W. *See* **Berger, Alan E.; et al., 81g:65120**
Rosinger, E. E. Stability and convergence for nonlinear difference schemes are equivalent. **81m:65151**
Sepehrnoori, K. *See* **Carey, G. F., 81d:65054**
Sobolevskiĭ, P. E. *See* **Alibekov, H. A., 81j:65100**
Varah, J. M. Stability restrictions on second order, three level finite difference schemes for parabolic equations. **81g:65121**

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Ansorge, R. Existence and numerical representation of generalized solutions of nonlinear partial initial value problems. **(81m:65083)**
Aziz, A. K. (*with* Schneider, Manfred; Werschulz, Arthur G.) A finite element method for the Tricomi problem. **(81i:65069)**
Berger, Alan E. (*with* Solomon, Jay M.; Ciment, Melvyn; Leventhal, Stephen H.; Weinberg, Bernard C.) Generalized OCI schemes for boundary layer problems. **(81f:65057)**
Bogomolov, S. V. Convergence and application of the method of summary approximation for a system of Vlasov equations. (Russian) **(81d:35068)**
Brandt, Achi Multilevel adaptive computations in fluid dynamics. **(81m:65152)**
Brown, Philip S., Jr. (*with* Pandolfo, Joseph P.) A gravity-wave problem with the upstream difference method. **(81g:76009)**
Ciment, Melvyn *See* **Berger, Alan E.; et al., (81f:65057)**
Gustafsson, Bertil Numerical solution of hyperbolic systems with different time scales using asymptotic expansions. **(81e:76081)**
van der Houwen, P. J. *See* **Kok, J.; et al., (81d:65053)**
Janenko, N. N. *See* **Voroĭcov, E. V., (81h:76037)**
Kok, J. (*with* van der Houwen, P. J.; Wolkenfelt, P. H. M.) ★A semidiscretization algorithm for two-dimensional partial differential equations. **(81d:65053)**
Kuz′min, A. V. (*with* Makarov, V. L.; Meladze, G. V.) A completely conservative difference scheme for equations of gas dynamics in Euler variables. (Russian) **(81b:76043)**
Leventhal, Stephen H. *See* **Berger, Alan E.; et al., (81f:65057)**
Makarov, V. L. (*with* Sa″dullaev, S. S.) Four-point difference scheme for the Goursat problem. (Russian. English summary) **(81m:65149)**
See also **Kuz′min, A. V.; et al., (81b:76043)**
Meladze, G. V. *See* **Kuz′min, A. V.; et al., (81b:76043)**
Miller, Robert N. *See* **Rinzel, John, (81g:92012)**
Oliger, Joseph Constructing stable difference methods for hyperbolic equations. **(81k:65102)**
Pandolfo, Joseph P. *See* **Brown, Philip S., Jr., (81g:76009)**
Piskarev, S. I. Discretization of an abstract hyperbolic equation. (Russian. English summary) **(81a:34053a)**
Solution of an inhomogeneous abstract linear hyperbolic equation. (Russian. English summary) **(81a:34053b)**
Reddy, J. N. (*with* Warburton, J. D.) A comparative study of numerical schemes for the solution of two-dimensional advection flows. **(81m:76015)**
Rinzel, John (*with* Miller, Robert N.) Numerical calculation of stable and unstable periodic solutions to the Hodgkin-Huxley equations. **(81g:92012)**
Sa″dullaev, S. S. *See* **Makarov, V. L., (81m:65149)**
Schneider, Manfred *See* **Aziz, A. K.; et al., (81i:65069)**
Solomon, Jay M. *See* **Berger, Alan E.; et al., (81f:65057)**
Voroĭcov, E. V. (*with* Janenko, N. N.) On some algorithms for shock wave recognition by shock-capturing computational results. **(81h:76037)**
Warburton, J. D. *See* **Reddy, J. N., (81m:76015)**
Weinberg, Bernard C. *See* **Berger, Alan E.; et al., (81f:65057)**
Werschulz, Arthur G. *See* **Aziz, A. K.; et al., (81i:65069)**
Wolkenfelt, P. H. M. *See* **Kok, J.; et al., (81d:65053)**
Zagorodnikov, Ju. I. (*with* Zarubin, A. G.) A boundary value problem for equations of vector flows in the ocean. (Russian) **(81j:35102)**
Zarubin, A. G. *See* **Zagorodnikov, Ju. I., (81j:35102)**

65M15 Error bounds

Baker, Garth A. (*with* Dougalis, Vassilios A.) On the L^∞-convergence of Galerkin approximations for second-order hyperbolic equations. **81f:65066**

(*with* Dougalis, Vassilios A.; Karakashian, Ohannes) On multistep-Galerkin discretizations of semilinear hyperbolic and parabolic equations. **81j:65103**

Dougalis, Vassilios A. *See* **Baker, Garth A., 81f:65066** *and* **Baker, Garth A.; et al., 81j:65103**

Fujita, Hiroshi (*with* Suzuki, Takashi) On the finite element approximation for evolution equations of parabolic type. **81c:65045**

Gavriljuk, I. P. (*with* Makarov, V. L.) A method for solving boundary value problems for nonlinear parabolic equations. (Russian. English summary) **81i:65074**

Grudnickiĭ, V. G. On the behavior of the numerical solution of boundary value problems for evolution equations in large domains. (Russian) **81h:65096**

Karakashian, Ohannes *See* **Baker, Garth A.; et al., 81j:65103**

Le Roux, Marie-Noëlle Méthodes multipas pour des équations paraboliques non linéaires. (English summary) **81i:65075**

Makarov, V. L. *See* **Gavriljuk, I. P., 81i:65074**

Scarpini, F. The numerical approximation of a unilateral parabolic problem with respect to some nonlinear operators. (Italian. English summary) **81c:65046**

Suzuki, Takashi *See* **Fujita, Hiroshi, 81c:65045**

secondary classifications:

Aziz, A. K. (*with* Schneider, Manfred; Werschulz, Arthur G.) A finite element method for the Tricomi problem. **(81i:65069)**

Bramble, James H. (*with* Sammon, Peter H.) Efficient higher order single step methods for parabolic problems. I. **(81h:65110)**

Dougalis, Vassilios A. Multistep-Galerkin methods for hyperbolic equations. **(81b:65081)**

Luskin, Mitchell A finite element method for first-order hyperbolic systems. **(81i:65092)**

Pasciak, Joseph E. Spectral and pseudospectral methods for advection equations. **(81i:65073)**

Sammon, Peter H. *See* **Bramble, James H., (81h:65110)**

Schneider, Manfred *See* **Aziz, A. K.; et al., (81i:65069)**

Werschulz, Arthur G. *See* **Aziz, A. K.; et al., (81i:65069)**

65M20 Method of lines

Bezdetnyĭ, B. P. (*with* Lavrik, V. I.) Application of the differential-difference method to problems of non-steady-state convective diffusion of soluble substances. (Russian) **81g:65122**

Heuss, Jörg Existenzsätze mit der Linienmethode für parabolische Probleme und periodische Lösungen von $u_t = f(t, x, u, u_x, u_{xx})$. (English summary) **81j:65104**

Lavrik, V. I. *See* **Bezdetnyĭ, B. P., 81g:65122**

Strikwerda, John C. Initial-boundary value problems for the method of lines. **81d:65055**

secondary classifications:

Hairer, E. Unconditionally stable explicit methods for parabolic equations. **(81h:65076)**

Kostyleva, V. D. Optimality conditions in a nonlinear heat distribution control problem. (Russian. English summary) **(81c:93045)**

65M25 Method of characteristics

Dittrich, Susanne (*with* Hackbusch, Wolfgang) A method of characteristics solving the initial-boundary value problem of a hyperbolic differential equation of second order. **81f:65067**

Hackbusch, Wolfgang *See* **Dittrich, Susanne, 81f:65067**

secondary classifications:

Averenkova, G. I. (*with* Egorova, N. I.; Pirumov, U. G.) Motion of a polydisperse mixture of a gas and particles in a supersonic jet. (Russian) **(81h:76056)**

Egorova, N. I. *See* **Averenkova, G. I.; et al., (81h:76056)**

Pirumov, U. G. *See* **Averenkova, G. I.; et al., (81h:76056)**

65M30 Improperly posed problems

Bakaev, N. Ju. (*with* Tarasov, R. P.) A problem of transformation of three-dimensional potential fields. (Russian) **81k:65105**

Glasko, V. B. *See* **Vabiščevič, P. N.; et al., 81j:65105**

Kriksin, Ju. A. *See* **Vabiščevič, P. N.; et al., 81j:65105**

Manselli, Paolo (*with* Miller, Keith) Dimensionality reduction methods for efficient numerical solution, backward in time, of parabolic equations with variable coefficients. **81h:65097**

Miller, Keith *See* **Manselli, Paolo, 81h:65097**

Tarasov, R. P. *See* **Bakaev, N. Ju., 81k:65105**

Vabiščevič, P. N. Numerical solution of the Cauchy problem for elliptic equations and systems. (Russian) **81h:65098**

(*with* Glasko, V. B.; Kriksin, Ju. A.) Solution of a problem of Hadamard by an algorithm that is regularizing in the sense of A. N. Tihonov. (Russian) **81j:65105**

65M50 Mesh generation and refinement

65M60 Finite elements, Rayleigh-Ritz and Galerkin methods, finite methods

65M99 None of the above, but in this section

Brilla, J. Finite element method for quasiparabolic equations. **81d:65056**

Burlačenko, V. P. (*with* Sidenko, M. I.) Solution by an approximation method of a Cauchy problem for a hyperbolic equation. (Russian) **81c:65047**

Dougalis, Vassilios A. (*with* Serbin, Steven M.) On the superconvergence of Galerkin approximations to second-order hyperbolic equations. **81j:65106**

Iosipčuk, M. D. (*with* Sjavavko, M. S.) Solution of a class of equations in functional derivatives by the method of successive approximations. (Russian) **81i:65076**

Machura, Marek (*with* Sweet, Roland A.) A survey of software for partial differential equations. **81k:65106**

Serbin, Steven M. *See* **Dougalis, Vassilios A., 81j:65106**

Sidenko, M. I. *See* **Burlačenko, V. P., 81c:65047**

Sjavavko, M. S. *See* **Iosipčuk, M. D., 81i:65076**

Sweet, Roland A. *See* **Machura, Marek, 81k:65106**

Vaughn, Randy Solutions of linear Sobolev differential equations. **81g:65123**

Vigak, V. M. Construction of the solution of the heat equation for a piecewise-homogeneous body. (Russian. English summary) **81k:65107**

secondary classifications:

Chung, T. J. (*with* Karr, G. R.) Significance of convective term in transport equation. **(81g:65146)**

Eardley, Douglas M. Global problems in numerical relativity. (*See* **81j:83017**)

Ho, Chung You *See* **Tang, Min Ming, (81m:92048)**

Karr, G. R. *See* **Chung, T. J., (81g:65146)**

Mareş, C. (*with* Mareş, Ileana) The integration of the hydrodynamic primitive equations by the spectral method. (*See* **81j:93006a**)

Mareş, Ileana *See* **Mareş, C., (See 81j:93006a)**

Talagrand, Olivier Initialisation d'un modèle numérique d'atmosphère à partir de données distribuées dans le temps. **(81h:86007)**

Tang, Min Ming (*with* Ho, Chung You) Numerical solutions of competing species equations with diffusion. **(81m:92048)**

65Nxx Partial differential equations, boundary value problems

Glowinski, Roland (*with* Periaux, J.; Pironneau, Olivier) An efficient preconditioning scheme for iterative numerical solutions of partial differential equations. **81j:65107**

Periaux, J. *See* **Glowinski, Roland; et al., 81j:65107**

Pironneau, Olivier *See* **Glowinski, Roland; et al., 81j:65107**

secondary classifications:

(Baker, Christopher T. H.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Delves, L. M.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Fox, L.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Freeman, T. L.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

Frey, A. E. (*with* Hall, Charles Allen; Porsching, T. A.) Numerical integration and the constant strain condition. **(81a:65029)**

(Gladwell, Ian) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

Hall, Charles Allen *See* **Frey, A. E.; et al., (81a:65029)**

(Hall, George) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Hendry, J. A.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Phillips, C.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

Porsching, T. A. *See* **Frey, A. E.; et al., (81a:65029)**

(Prothero, A.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Reid, J. D.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Scheffler, S.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Smith, I. M.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Wait, R.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Walsh, Joan) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Watt, J. M.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Whiteman, J. R.) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

(Williams, Jack) *See* **Survey of numerical methods for partial differential equations, (81i:65002)**

Partial differential equations ★A survey of numerical methods for partial differential equations. **(81i:65002)**

Survey of numerical methods for partial differential equations ★A survey of numerical methods for partial differential equations. **(81i:65002)**

65N05 Derivation of finite difference approximations

Adžubeĭ, L. T. (*with* Lobok, A. P.) Synthesis of optimal boundary control for a two-dimensional heat equation by means of finite-difference approximations. (Russian. English summary) **81k:65108**

Barnes, D. C. *See* **Brackbill, J. U., 81f:65068**

Böhmer, Klaus Asymptotic expansions for the discretization error in Poisson's equation on general domains. **81g:65124**

Brackbill, J. U. (*with* Barnes, D. C.) The effect of nonzero $\nabla \cdot \mathbf{B}$ on the numerical solution of the magnetohydrodynamic equations. **81f:65068**

Brandt, Achi Multilevel adaptive techniques (MLAT) for singular-perturbation problems. **81d:65057**

Multilevel adaptive computations in fluid dynamics. **81m:65152**

Caldwell, James An application of extrapolation to the limit. **81m:65153**

Dekker, K. Semidiscretization methods for partial differential equations on nonrectangular grids. **81g:65125**

Dey, Suhrit K. Nonlinear discretization errors in partial difference equations. **81g:65126**

Hagin, Maria A method of approximating the solution of a nonlinear partial differential equation. (Romanian. French summary) **81f:65069**

Hoskins, W. D. (*with* Pathan, G. M.; Walton, D. J.) Solution of bilinear systems arising from high order discretizations of Poisson-type equations. **81j:65108**

Jones, I. P. (*with* Thompson, C. P.) A note on the use of nonuniform grids in finite difference calculations. **81m:65154**

Karčevskiĭ, M. M. *See* **Ljaško, A. D.,** (*See* **80c:00006**)

Karetkina, N. V. An unconditionally stable difference scheme for parabolic equations with first derivatives. (Russian) **81a:65090**

Khalil, Hatem M. *See* **Ulery, Dana L., 81f:65072**

Koskin, P. I. A scheme of increased accuracy for a heat equation with discontinuous coefficients. (Russian) **81c:65048**

Krugljakov, S. V. *See* **Zaharov, A. Ju., 81m:65156**

Krukier, L. A. Implicit difference schemes and an iteration method for their solution for a class of systems of quasilinear equations. (Russian) **81b:65083**

Liszka, T. (*with* Orkisz, J.) The finite difference method at arbitrary irregular grids and its application in applied mechanics. **81d:65058**

Ljaško, A. D. (*with* Karčevskiĭ, M. M.) Study of difference schemes for nonlinear equations by a variational method. (*See* **80c:00006**)

Difference schemes for fourth-order quasilinear elliptic equations. (Russian) **81b:65099**

Lobok, A. P. *See* **Adžubeĭ, L. T., 81k:65108**

Lynch, Robert E. (*with* Rice, John R.) The Hodie method and its performance for solving elliptic partial differential equations. **81i:65077**

Malec, Marian Sur une méthode des différences finies pour une équation non linéaire différentielle fonctionnelle aux dérivées mixtes. **81i:65078**

Middlecoff, J. F. *See* **Thomas, P. D., 81f:65071**

Nikolaev, E. S. (*with* Samarskiĭ, A. A.) Finite difference methods for solving elliptic equations in irregular regions. (Russian) **81h:65100**

Orkisz, J. *See* **Liszka, T., 81d:65058**

Pathan, G. M. *See* **Hoskins, W. D.; et al., 81j:65108**

Polevoĭ, V. I. A method of choosing systems of coordinate functions in the solution of an exterior Dirichlet boundary value problem for a domain of complex form. (Russian) **81b:65084**

Ramizov, Ž. R. (*with* Sa″dullaev, S. S.) Difference schemes of the fourth order of accuracy for second-order equations of elliptic type. (Russian) **81b:65085**

Reznik, A. A. (*with* Rjaben′kiĭ, V. S.) An accelerated method of internal boundary conditions and a related approach to the calculation of singular integrals. (Russian) **81b:65086**

Rice, John R. *See* **Lynch, Robert E., 81i:65077**

Rjaben′kiĭ, V. S. *See* **Reznik, A. A., 81b:65086**

Sa″dullaev, S. S. *See* **Ramizov, Ž. R., 81b:65085**

Samarskiĭ, A. A. *See* **Nikolaev, E. S., 81h:65100**

Sorenson, R. L. *See* **Steger, Joseph L., 81k:65109**

Stanev, H. I. On an approximate method for the solution of nonstationary problems of mathematical physics. (Bulgarian. Russian and English summaries) **81b:65087**

Steger, Joseph L. (*with* Sorenson, R. L.) Automatic mesh-point clustering near a boundary in grid generation with elliptic partial differential equations. **81k:65109**

Stoyan, Gisbert Über eine monotone Differenzennapproximation einer partiellen Differentialgleichung. **81m:65155**

Strikwerda, John C. Iterative methods for the numerical solution of second order elliptic equations with large first order terms. **81f:65070**

Tamme, È. A difference method for solving the Neumann problem in a two-dimensional domain. (Russian. German summary) **81k:65110**

Thomas, P. D. (*with* Middlecoff, J. F.) Direct control of the grid point distribution in meshes generated by elliptic equations. **81f:65071**

Thompson, C. P. *See* **Jones, I. P., 81m:65154**

Ulery, Dana L. (*with* Khalil, Hatem M.) A seminumeric difference algorithm. **81f:65072**

Volkov, E. A. The method of nets for the Laplace and Poisson equations on domains with smooth and piecewise-smooth boundaries. (Russian) (*See* **80f:35002**)

Walton, D. J. *See* **Hoskins, W. D.; et al., 81j:65108**

Windisch, Günther Zur Zeitschrittweitenwahl bei Differenzenmethoden für quasilineare Wärmeleitprobleme. **81g:65127**

Yserentant, Harry Die Mehrstellenformeln für den Laplaceoperator. **81h:65101**

Zaharov, A. Ju. (*with* Krugljakov, S. V.) A difference operator of high-order accuracy and its application in the method of lines. (Russian) **81m:65156**

Zlotnik, A. A. On the rate of convergence of the projection-difference scheme with a splitting operator for parabolic equations. (Russian) **81k:65111**

secondary classifications:

Akbarov, A. Study of a system of nonlinear difference-differential equations connected with multipoint boundary value problems of filtration. (Russian) **(81i:35155)**

Berikelashvili, G. K. An approach to the difference method of solving the problem of bending of orthotropic plates. (Russian. Georgian and English summaries) **(81e:73053)**

Bleier, Ja. F. (*with* Grinhof, M. F.; Rodè, È. È.; Spalvin′, A. P.; Janbickiĭ, R. A.) Parallel computing methods and means for solving boundary value problems of field theory. (Russian) **(81g:78042)**

Blottner, F. G. Variable grid scheme for discontinuous grid spacing and derivatives. **(81g:76039)**

Braun, R. L. *See* **Chin, R. C. Y., (81k:76069)**

Četverušikin, B. N. *See* **Repina, G. E., (81a:80005)**

Chin, R. C. Y. (*with* Braun, R. L.) Numerical solutions of chemically reacting flows in porous media. **(81k:76069)**

Christie, I. *See* **Griffiths, D. F.; et al., (81h:80003)**

Čujanov, V. A. *See* **Potapenko, I. F., (81k:82037)**

Favorskiĭ, A. P. *See* **Gasilov, V. A.; et al., (81c:76051)**

Fomin, W. M. *See* **Kovalev, O. B.; et al., (81d:80006)**

Gasilov, V. A. (*with* Koršija, T. K.; Ljubimov, B. Ja.; Favorskiĭ, A. P.) On the calculation of equations of magnetic hydrodynamics for a medium with finite electrical conductivity. (Russian. English summary) **(81c:76051)**

Goglja, A. A. ★Численное решение задачи о концентрации напряжений около прямоугольного отверстия в прямоугольных пластинках. (Russian) [Numerical solution of a problem about concentration of stresses around a rectangular aperture in rectangular plates] **(81m:73023)**

Griffiths, D. F. (*with* Christie, I.; Mitchell, Andrew Ronald) Analysis of error growth for explicit difference schemes in conduction-convection problems. **(81h:80003)**

Grinhof, M. F. *See* **Bleier, Ja. F.; et al., (81g:78042)**

Hicks, Darrell L. The hydrocode convergence problem. I. **(81k:76050a)**

The hydrocode convergence problem. II. **(81k:76050b)**

van der Houwen, P. J. *See* **Kok, J.; et al., (81d:65053)**

Janbickiĭ, R. A. *See* **Bleier, Ja. F.; et al., (81g:78042)**

Janenko, N. N. *See* **Kovalev, O. B.; et al., (81d:80006)**

Kawarada, Hideo Numerical solution of free boundary problem for ideal fluid. **(81k:76013)**

Killeen, J. (*with* Schnack, D. D.; Shestakov, A. I.) Linear and nonlinear calculation of resistive magnetohydrodynamic instabilities. **(81k:76026)**

Kleiza, Jonas *See* **Kleiza, Vytautas, (81h:78005)**

Kleiza, Vytautas (*with* Kleiza, Jonas) Numerical solution of Maxwell equations with tensor coefficients. (Russian. Lithuanian and English summaries) **(81h:78005)**

Kok, J. (*with* van der Houwen, P. J.; Wolkenfelt, P. H. M.) ★A semidiscretization algorithm for two-dimensional partial differential equations. **(81d:65053)**

Koršija, T. K. *See* **Gasilov, V. A.; et al., (81c:76051)**

Kovalev, O. B. (*with* Lar′kin, N. A.; Fomin, W. M.; Janenko, N. N.) The solution of nonhomogeneous thermal problems and the Stefan single-phase problem in arbitrary domains. **(81d:80006)**

Lar′kin, N. A. *See* **Kovalev, O. B.; et al., (81d:80006)**

Leszczyński, Hieronim *See* **Marszał, Julian, (81b:73041)**

Li, C. P. A computational procedure for supersonic flows governed by the parabolic Navier-Stokes equations. **(81g:76070)**

Litvak, M. L. Solution of some optimal control problems for finite-difference analogues of equations of elliptic type. (Russian) **(81f:65051)**

Ljubimov, B. Ja. *See* **Gasilov, V. A.; et al., (81c:76051)**

Marszał, Julian (*with* Leszczyński, Hieronim) A system of algebraic equations with a sparse matrix for the shield problem using the variational finite difference method. (Polish. Russian and English summaries) **(81b:73041)**

Mitchell, Andrew Ronald *See* **Griffiths, D. F.; et al., (81h:80003)**

Nikulin, G. Z. (*with* Pirumov, U. G.; Pčelkina, L. V.; Rosljakov, G. S.) Three-dimensional flows of a gas in jets. (Russian) **(81a:76032)**

Ohring, Samuel (*with* Telste, John) The direct matrix imbedding technique for computing three-dimensional potential flow about arbitrarily shaped bodies. **(81b:76013)**

Osher, Stanley One-sided difference schemes and transonic flow. **(81j:76057)**

Pčelkina, L. V. *See* **Nikulin, G. Z.; et al., (81a:76032)**

Pirumov, U. G. *See* **Nikulin, G. Z.; et al., (81a:76032)**

Potapenko, I. F. (*with* Čujanov, V. A.) Completely conservative difference schemes for a two-dimensional Landau equation. (Russian) **(81k:82037)**

Repina, G. E. (*with* Četveruškin, B. N.) A method of solving the radiation transport equation in two-dimensional problems of radiative gas dynamics. (Russian) **(81a:80005)**

Rodè, È. È. *See* **Bleier, Ja. F.; et al., (81g:78042)**

Rosljakov, G. S. *See* **Nikulin, G. Z.; et al., (81a:76032)**

Šaškov, M. Ju. Violation of conservation laws in iteration solutions of difference equations. (Russian. English summary) **(81a:80006)**

Schnack, D. D. *See* **Killeen, J.; et al., (81k:76026)**

Shestakov, A. I. *See* **Killeen, J.; et al., (81k:76026)**

Smarr, Larry L. Basic concepts in finite differencing of partial differential equations. (*See* **81j:83017**)

Sonneveld, P. *See* **Wesseling, P., (81b:65117)**

Spalvin′, A. P. *See* **Bleier, Ja. F.; et al., (81g:78042)**

Takemitsu, Nobumasa On a finite-difference approximation for the steady-state Navier-Stokes equations. **(81e:76030)**

Telste, John *See* **Ohring, Samuel, (81b:76013)**

Wesseling, P. (*with* Sonneveld, P.) Numerical experiments with a multiple grid and a preconditioned Lanczos type method. **(81b:65117)**

Wolkenfelt, P. H. M. *See* **Kok, J.; et al., (81d:65053)**

65N10 Stability and convergence of difference methods

Abrašin, V. N. (*with* Matus, P. P.) Difference schemes for nonlinear hyperbolic equations with piecewise-smooth solutions. II. (Russian) **81b:65088**

(*with* Asmolik, V. A.) Uniform convergence of forward difference schemes for multidimensional quasilinear parabolic equations. I. (Russian) **81j:65109a**

(*with* Asmolik, V. A.) Uniform convergence of forward difference schemes for multidimensional quasilinear parabolic equations. II. (Russian) **81j:65109b**

Ageeva, D. A. A remark on the rate of convergence of S. A. Čaplygin's method. (Russian) (*See* **80d:00021**)

Aliev, M. A. *See* **Tagiev, F. A., (*See* 80d:00021)**

Andreev, V. B. (*with* Krjakvina, S. A.) Grid approximation of a problem on a point source. (Russian) **81h:65102**

Asmolik, V. A. *See* **Abrašin, V. N., 81j:65109a** *and* **Abrašin, V. N., 81j:65109b**

Baumeister, J. (*with* Hoffmann, Karl-Heinz; Jochum, P.) Numerical solution of a parabolic free boundary problem via Newton's method. **81j:65110**

Bogomolov, S. V. Convergence of the method of summary approximation for the Boltzmann equation. (Russian) **81h:65103**

Brosowski, Bruno Die Anwendung eines verallgemeinerten Korovkin-Satzes auf die Konvergenz gewisser Differenzen-Verfahren. **81i:65079**

Bulkin, A. A. The stability of a difference scheme for the heat equation with a boundary condition of concentrated capacity type. (Russian) **81b:65089**

Cvetkova, I. L. *See* **Karamzin, Ju. N., 81c:65049**

Dautov, R. Z. (*with* Lapin, A. V.) Difference schemes of an arbitrary order of accuracy for quasilinear elliptic equations. (Russian) **81g:65128**

D'jakonov, E. G. Asymptotic minimization of computational work in the application of projection-difference methods. (Russian) **81j:65111**

Dmitrenko, M. E. The variational-difference method of solving the third boundary value problem in a three-dimensional domain with an entering angle. (Russian) **81i:65080**

Dzakupov, K. B. Study of the convergence to the classical solution of certain difference schemes for steady-state Helmholtz equations. (Russian) **81h:65104**

Esikova, N. B. A method of numerical solution of the Vlasov equation. (Russian) **81k:65112**

Favorskiĭ, A. P. *See* **Korilja, T. K.; et al., 81k:65113**

Frank, Léonid S. Elliptic difference singular perturbations. **81g:65130**

Difference singular perturbations. I. A priori estimates. **81g:65129**

Frjazinov, I. V. The balance method and variational-difference schemes. (Russian) **81j:65112**

Galba, E. F. Convergence of a regularized difference scheme for the Neumann problem. (Russian) **81m:65157**

Gavriljuk, I. P. *See* **Makarov, V. L.; et al., 81b:65090**

Guseĭnov, A. M. (*with* Tagiev, F. A.) Approximate solution of the Cauchy problem for a degenerate quasilinear equation by the finite difference method. (Russian) **81i:65081**

Heinrich, Bernd Monotone Differenzenapproximationen für lineare elliptische Differentialgleichungen mit gemischten Randbedingungen. **81h:65105**

Hoff, David Stability and convergence of finite difference methods for systems of nonlinear reaction-diffusion equations. **81g:65131**

Hoffmann, Karl-Heinz *See* **Baumeister, J.; et al., 81j:65110**

Jain, P. C. (*with* Kadalbajoo, M. K.) A numerical technique for solving nonlinear elliptic problems. **81a:65091**

Janenko, N. N. (*with* Šokin, Ju. I.; Zaharov, Ju. N.) On the nonlinear acceleration of iterative schemes. **81j:65113**

Jochum, P. *See* **Baumeister, J.; et al., 81j:65110**

Kadalbajoo, M. K. *See* **Jain, P. C., 81a:65091**

Karamzin, Ju. N. (*with* Cvetkova, I. L.) Spectral method for solving nonlinear quasioptical problems. (Russian. English summary) **81c:65049**

Korilja, T. K. (*with* Tiškin, V. F.; Favorskiĭ, A. P.; Šaškov, M. Ju.) A variational approach to the construction of difference schemes on curvilinear grids for the heat equation. (Russian) **81k:65113**

Krjakvina, S. A. *See* **Andreev, V. B., 81h:65102**

Krupnov, Ju. P. Convergence of an implicit three-layer difference scheme for a quasilinear hyperbolic system. (Russian. English summary) **81g:65132**

Lapin, A. V. *See* **Dautov, R. Z., 81g:65128**

Lawson, J. Douglas (*with* Morris, J. Ll.; Wilkes, M. V.) On the exact solution of linear constant coefficient parabolic partial differential equations using (1, 1) Padé approximations. **81c:65050**

Ljaško, Ĭ. Ĭ. (*with* Pedorčenko, L. I.; Skorobagat'ko, A. A.) Difference schemes for a class of parabolic equations with nonstationary nonlinear boundary conditions. (Russian. English summary) **81g:65133**

Makarov, V. L. (*with* Sa″dullaev, S. S.) On the question of convergence of difference schemes for the Helmholtz equation in a rectangle. (Russian) **81i:65082**

(*with* Gavriljuk, I. P.; Šmanenko, T. L.) The regularization of difference schemes for quasilinear elliptic equations in the strip. (Russian. English summary) **81b:65090**

Mattioli, F. Numerical instabilities of the integral approach to the interior boundary value problem for the two-dimensional Helmholtz equation. **81g:65134**

Matus, P. P. *See* **Abrašin, V. N., 81b:65088**

McCrory, Robert L. (*with* Orszag, Steven A.) Spectral methods for multidimensional diffusion problems. **81g:65135**

Morris, J. Ll. *See* **Lawson, J. Douglas; et al., 81c:65050**

Orszag, Steven A. *See* **McCrory, Robert L., 81g:65135**

Pedorčenko, L. I. *See* **Ljaško, Ĭ. Ĭ.; et al., 81g:65133**

Sa″dullaev, S. S. *See* **Makarov, V. L., 81i:65082**

Sapagovas, Mifodijus Construction of difference schemes of increased accuracy for quasilinear elliptic equations. III. The two-dimensional case. (Russian. Lithuanian and English summaries) **81b:65091**

Šaškov, M. Ju. *See* **Korilja, T. K.; et al., 81k:65113**

Schatz, Alfred H. (*with* Thomée, Vidar; Wahlbin, Lars B.) Maximum norm stability and error estimates in parabolic finite element equations. **81g:65136**

Schechter, Ervin On the numerical solution of a nonlinear parabolic equation. **81f:65073**

Šiškin, G. I. The grid method for solving elliptic equations with discontinuous boundary conditions. (Russian) **81b:65092**

Skorobagat'ko, A. A. *See* **Ljaško, Ĭ. Ĭ.; et al., 81g:65133**

Sloan, D. M. On boundary conditions for the numerical solution of hyperbolic differential equations. **81g:65137**

Šmanenko, T. L. *See* **Makarov, V. L.; et al., 81b:65090**

Šokin, Ju. I. *See* **Janenko, N. N.; et al., 81j:65113**

Stoyan, Gisbert On the asymptotic stability of some efficient difference schemes. (Russian) **81j:65114**

Tagiev, F. A. (*with* Aliev, M. A.) A basis for convergence of a Tricomi difference problem for an equation of Čaplygin's type. (Russian) (*See* **80d:00021**)

See also **Guseĭnov, A. M., 81i:65081**

Thomée, Vidar *See* **Schatz, Alfred H.; et al., 81g:65136**

Tiškin, V. F. *See* **Korilja, T. K.; et al., 81k:65113**

Turkel, Eli On the practical use of high-order methods for hyperbolic systems. **81f:65074**

Vitjuk, A. N. A difference method of solving the Goursat problem for a class of hyperbolic differential equations. (Russian) **81b:65093**

Wahlbin, Lars B. *See* **Schatz, Alfred H.; et al., 81g:65136**

Weinelt, Wilfried Differenzenverfahren für die stationäre Wärmeleitungsgleichung mit nichtlinearem Anteil vom Strahlungstyp—Methode der monotonen Operatoren. **81g:65138a**

(*with* Windisch, Günther) Numerische Lösung der Wärmeleitungsgleichung mit nichtlinearem Anteil für Rechteckgebiete durch Differenzenmethoden. **81g:65138b**

Wilkes, M. V. *See* **Lawson, J. Douglas; et al., 81c:65050**

Windisch, Günther *See* **Weinelt, Wilfried, 81g:65138b**

Zaharov, Ju. N. *See* **Janenko, N. N.; et al., 81j:65113**

secondary classifications:

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Tippenhauer, Ulrich Eine Projektionsmethode für das biharmonische Problem. (English summary) **81a:65111**

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Díaz, Julio César Collocation-H^{-1}-Galerkin method for parabolic problems with time-dependent coefficients. **(81b:65099)**

65N40 Methods of lines

Corduneanu, Constantin Ordinary differential equations approximating partial differential equations. **81m:65183**
Kubanskaja, A. P. Convergence with order h^{2p-1} of a $(2p+1)$-point scheme of the method of straight lines for a boundary value problem. (Russian) **81j:65127**
Makarov, V. L. (*with* Samarskiĭ, A. A.) Application of exact difference schemes to estimation of the convergence rate of the method of lines. (Russian) **81k:65131**
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Fage, D. M. Semianalytic method of solving an elastoplastic problem. (Russian) **(81h:73023)**
Jerome, Joseph W. Horizontal line analysis of the multidimensional porous medium equation: existence, rate of convergence and maximum principles. **(81m:35013)**
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65N45 Method of contraction of the boundary

65N50 Mesh generation and refinement

65N99 None of the above, but in this section

Chia, C. Y. *See* **Sathyamoorthy, M., 81g:65166**
Clements, D. L. (*with* Crowe, Jacqueline) A method for the numerical solution of some elliptic boundary value problems for a strip. **81m:65184**
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Sathyamoorthy, M. (*with* Chia, C. Y.) Large amplitude vibration of orthotropic elliptical plates. (German summary) **81g:65166**
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Symes, W. W. Numerical stability in an inverse scattering problem. **81k:65135**
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Babakov, A. V. (*with* Severinov, L. I.) A conservative numerical method of "flows" for the solution of problems in continuum mechanics. (Russian) (*See* **81g:76084**)
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Campbell, J. B. The solution by fast Fourier transforms of Laplace's equation in a toroidal region with a rectangular cross section. **(81e:65068)**
Collatz, Lothar Monotonicity and free boundary value problems. **(81m:65188)**
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Habashi, Wagdi G. Numerical methods of turbomachinery. (*See* **81j:76002**)
Hald, Ole H. (*with* Mauceri Del Prete, Vincenza) Convergence of vortex methods for Euler's equations. **(81b:76015a)**
Convergence of vortex methods for Euler's equations. II. **(81b:76015b)**
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Moin, P. (*with* Kim, J.) On the numerical solution of time-dependent viscous incompressible fluid flows involving solid boundaries. **(81b:76021)**
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Nowak, Zenon Staggered grid method for determining the time-dependent two-dimensional flows of a viscous fluid. (Polish. English and Russian summaries) (*See* **81m:73008**)
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65P05 Partial differential equations, miscellaneous problems

Abe, Kanji (*with* Inoue, Osamu) Fourier expansion solution of the Korteweg-de Vries equation. **81a:65113**

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Bolley, Catherine Solutions numériques de problèmes de bifurcation. (English summary) **81k:65136**

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Difference and variational-difference methods ★Разностные и вариационно-разностные методы. (Russian) [Difference and variational-difference methods] **(81b:65003a)**
Novosibirsk ★Разностные и вариационно-разностные методы. (Russian) [Difference and variational-difference methods] **(81b:65003a)**
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65Rxx Integral equations, integral transforms [See also 45Lxx.]

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Campbell, J. B. The solution by fast Fourier transforms of Laplace's equation in a toroidal region with a rectangular cross section. **81e:65068**
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secondary classifications:

Feldman, Y. D. *See* **Gončarov, V. A., (81d:78008)**
Gončarov, V. A. (*with* Feldman, Y. D.) Treatment of time-domain spectroscopy data in the lumped-capacitance method. Further considerations. **(81d:78008)**
Környei, I. *See* **Žileĭkin, Ja. M., (81b:65127)**
Maggiore, C. J. *See* **Nachamkin, Jack, (81j:78007)**
Nachamkin, Jack (*with* Maggiore, C. J.) A Fourier Bessel transform method for efficiently calculating the magnetic field of solenoids. **(81j:78007)**
Pinkley, George H. The nonoccurrence of secondary bifurcation with Hammerstein operators. **(81f:45005)**
Sidi, Avram Extrapolation methods for oscillatory infinite integrals. **(81m:40002)**
Zadiraka, V. K. Quadrature formulae with optimal accuracy for the calculation of the Fourier transform. **(81d:41038)**
Zanovello, Renato Numerical analysis of the Laplace transforms of the Anger and Weber functions. (Italian) **(81j:44003)**
Žileĭkin, Ja. M. (*with* Környei, I.) An upper estimate of the error of the approximate computation of the Fourier transform on the classes $D_p^{\alpha,\beta,\gamma}(A,B)$. (Russian. English summary) **(81b:65127)**
Zohar, Shalhav A prescription of Winograd's discrete Fourier transform algorithm. **(81a:94011)**

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Structure of recurrence relations in the study of stability in the numerical treatment of Volterra integral and integro-differential equations. **81b:65128**
Barnhill, Maurice V., III (*with* Russ, Craig) Improving the convergence of solutions to the Fredholm integral equation of the first kind. **81m:65193**
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Hämmerlin, Günther (*with* Schumaker, Larry L.) Procedures for kernel approximation and solution of Fredholm integral equations of the second kind. **81a:65122**

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(*with* Theocaris, P. S.) On convergence of two direct methods for solution of Cauchy-type singular integral equations of the first kind. **81g:65178**

(*with* Theocaris, P. S.) A comparison between the direct and the classical numerical methods for the solution of Cauchy type singular integral equations. **81a:65125**

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Ivanov, V. V. (*with* Kotenkova, G. N.) Optimization of algorithms for the solution of particular integral equations with respect to their realization time on a computer. (Russian) **81k:65146**

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McCormick, Steve Mesh refinement methods for integral equations. **81m:65202**

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Mika, K. *See* **Eckhardt, Ulrich, 81m:65196**

Nédélec, J.-C. Méthodes d'éléments finis courbes pour la résolution des équations intégrales singulières sur des surfaces de $\mathbf{R}^3$. **81e:65071**

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Papatheodorou, Theodore S. (*with* Jesanis, M. E.) Collocation methods for Volterra integro-differential equations with singular kernels. **81j:65137**

Paveri-Fontana, Stefano L. (*with* Rigacci, Rossella) A singularly perturbed weakly-singular integro-differential problem from analytical chemistry. **81a:65128**

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Pergament, A. H. (*with* Tel'kovskaja, O. V.) The regularization method and the maximum likelihood method in solution of integral equations of the first kind. (Russian) **81k:65150**

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Puhareva, N. V. An approximate method for solving integro-differential equations. (Russian) **81g:65181**

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te Riele, H. J. J. Introduction and global survey of numerical methods for integral equations. **81g:65182**

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Rogovoi, A. A. Solution of integral equations by the source method. (Russian) **81f:65092**

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Sadyrhanov, R. S. Solution of a class of nonlinear singular integral equations by the quadrature method. (Russian. Azerbaijani and English summaries) **81d:65074**

A discrete singular operator and its properties. (Russian. Azerbaijani and English summaries) **81f:65093**

Schippers, H. Multigrid techniques for the solution of Fredholm integral equations of the second kind. **81g:65183**

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Sjavavko, M. S. (*with* Odnovolova, T. N.) Representation of the solution of a class of nonlinear Fredholm equations by branching integral continued fractions. (Russian) **81i:65108**

Sloan, Ian H. A review of numerical methods for Fredholm equations of the second kind. **81h:65133**

The numerical solution of Fredholm equations of the second kind by polynomial interpolation. **81m:65203**

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Theocaris, P. S. (*with* Ioakimidis, N. I.) The Gauss-Jacobi numerical integration method applied to the solution of singular integral equations. **81h:65134**

(*with* Ioakimidis, N. I.; Chrysakis, A. C.) On the application of numerical integration rules to the solution of some singular integral equations. **81i:65109**

See also **Ioakimidis, N. I., 81a:65124**; **Ioakimidis, N. I., 81a:65125** *and* **Ioakimidis, N. I., 81g:65178**

Tivončuk, V. I. Solution of Volterra linear integral equations by the method of averaging functional corrections in combination with splines. (Russian) **81g:65185**

Tuong Ha Duong A finite element method for the double-layer potential solutions of the Neumann exterior problem. **81f:65094**

Vâţă, P. Convergence theorems of some numerical approximation schemes for the class of nonlinear integral equations. (Romanian and French summaries) **81h:65135**

de Vries, R. W. Invariant imbedding methods for integral equations. **81h:65136**

Wahba, Grace Smoothing and ill-posed problems. **81h:65137**

Zolotarevskiĭ, V. A. Approximate solution of systems of singular integro-differential equations. (Russian) **81b:65125**

(*with* Seičuk, V. N.) Solution of systems of nonlinear integral equations by the moment method. (Russian) **81m:65204**

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Akbari, Alireza (*with* Hess, James; Kagiwada, Harriet; Kalaba, Robert) The equivalence of team theory's integral equations and a Cauchy system: sensitivity analysis of a variational problem. **(81c:90003)**

(Albrecht, Julius) *See* **Numerical treatment of integral equations, (81j:65009)**

Andersson, Robert S. On the use of linear functionals for Abel-type integral equations in applications. **(81b:45026)**

Bainov, D. D. (*with* Sarafova, G. H.) An application of the numerical-analytic method of A. M. Samoĭlenko for investigation of periodic systems of integro-differential equations. **(81e:45025)**

Bestehorn, Maike Die Berechnung pharmakokinetischer Parameter—ein Bericht aus der Praxis. (English summary) **(81m:92006)**

Blue, James L. Integral equations for electromagnetic scattering by wide scatterers. **(81k:78011)**

Chandler, G. A. Superconvergence for second kind integral equations. **(81h:45027)**

Chatelin-Laborde, Françoise Sur les bornes d'erreur a posteriori pour les éléments propres d'opérateurs linéaires. (English summary) **(81d:65027)**

Cheney, E. W. Best approximation in tensor product spaces. **(81l:65012)**

Clements, D. L. (*with* Crowe, Jacqueline) A method for the numerical solution of some elliptic boundary value problems for a strip. **(81m:65184)**

(Collatz, Lothar) *See* **Numerical treatment of integral equations, (81j:65009)**

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Diekmann, O. Integral equations and population dynamics. **(81i:92017)**

Džiškariani, A. V. On the solution of singular integral equations by approximate projective methods. (Russian) **(81e:45022)**

Farafonov, V. G. *See* **Slavjanov, S. Ju., (81f:45004)**

Filatov, A. N. *See* **Karimov, A. U.; et al., (81i:73006)**

Freasier, B. C. *See* **Thompson, N. E., (81k:82042)**

Griffin, P. J. (*with* Koshel, R. D.) Iterative solutions to the nuclear reaction problem. **(81f:81087)**

Hącia, Lechosław On approximate solving of the Fourier problems. **(81k:45018)**

Hagin, Frank On the construction of well-conditioned systems for Fredholm I problems by mesh adapting. **(81j:45021)**

Harris, Wesley L. *See* **Sivaneri, Nithiam T., (81j:76058)**

Hassan, Hassan A. Z. Effect of a crack on the torsional deformation of a composite plate. I, II. (Arabic summary) **(81d:73078)**

Hess, James *See* **Akbari, Alireza; et al., (81c:90003)**

Hessein, Mohamed Ismail M. On approximate solution of mixed additive linear integral equations. (Arabic summary) **(81c:45024)**

Horomskiĭ, B. N. *See* **Židkov, E. P.; et al., (81i:81089)**

Ioakimidis, N. I. (*with* Theocaris, P. S.) The modified Lobatto-Chebyshev method applied to the numerical evaluation of stress intensity factors in cracks with a corner point. **(81d:73081)**

Kadulin, V. P. Solution of singular integral equations with complex conjugate unknowns by the reduction method. (Russian) **(81m:45010)**

Kagiwada, Harriet *See* **Akbari, Alireza; et al., (81c:90003)**

Kailath, Thomas (*with* Lévy, Bernard; Ljung, Lennart; Morf, Martin) The factorization and representation of operators in the algebra generated by Toeplitz operators. **(81c:47030)**

Kalaba, Robert *See* **Akbari, Alireza; et al., (81c:90003)**

Karačun, V. Ja. (*with* Čornous, K. A.) A boundary value problem for the heat equation in the case of heat exchange on one of the boundaries. (Russian. English summary) **(81g:65165)**

Karimov, A. U. (*with* Koltunov, S. A.; Filatov, A. N.) A generalized method of freezing in the theory of viscoelasticity. (Russian) **(81i:73006)**

Kas'janov, V. I. The method of mechanical quadratures for singular integral equations.

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Kerge, R. The method of subregions for a periodic problem. (Russian. German summary) (81e:45027)

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Krabs, W. Optimal error estimates for linear operator equations. (81g:65069)
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Kurganov, T. K. Asymptotic expansion of the solution of integro-differential equations by the multiscale method. (Russian) (81c:45018)

Labrujère, Th. E. Integral equation methods for multi-element airfoil analysis and design. (81e:76007)

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Mazilu, P. (*with* Păltineanu, Gavril) Semidiscretization method for the numerical solving of Volterra integral equations. (81m:45004)

Mihailov, G. A. Variance of vector algorithms of the Monte Carlo method. (Russian) (81m:65013)

Mir-Mohamad-Sadegh, A. (*with* Rajagopal, K. R.) The flow of a non-Newtonian fluid past projections and depressions. (81g:76001)

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Sivaneri, Nithiam T. (*with* Harris, Wesley L.) Numerical solutions of transonic flows by parametric differentiation and integral equation techniques. (81j:76058)

Slavjanov, S. Ju. (*with* Farafonov, V. G.) The construction of the asymptotics of the eigenfunctions of Fredholm integral equations with a symmetric rapidly oscillating kernel. II. (Russian) (81f:45004)

Spence, Alastair Product integration for singular integrals and singular integral equations. (81f:65024)

Sprekels, Jürgen Iterationsverfahren zur Einschließung positiver Lösungen superlinearer Integralgleichungen. (English summary) (81e:65025)

Starostenko, V. I. (*with* Sastri, R. G. S.) The regularizing solution of geophysical three-dimensional problems expressed by integral equations of the first kind of convolution type. (Russian) (81d:86010)

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Thompson, N. E. (*with* Freasier, B. C.) A new method of solution of the Ornstein-Zernike equation for a two-dimensional fluid. (81k:82042)

Victory, H. D., Jr. Convergence properties of discrete-ordinates solutions for neutron transport in three-dimensional media. (81g:45010)

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Zainiev, R. M. Application of two-norm convergence to the solution of a boundary value problem for an equation of mixed type. (Russian) (81k:35116)

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Agoškov, V. I. (*with* Lobarev, I. V.) Solution of the eigenvalue problem for a transport equation. (Russian) 81h:65138

Lobarev, I. V. *See* **Agoškov, V. I.,** 81h:65138

secondary classifications:

Brezzi, F. (*with* Johnson, Claes; Nédélec, J.-C.) On the coupling of boundary integral and finite element methods. (81e:65055a)
(*with* Johnson, Claes) On the coupling of boundary integral and finite element methods. (81e:65055b)

Burke, Edward A. Extended Numerov method for the numerical solution of the Hartree-Fock equations. (81h:65091)

Johnson, Claes *See* **Brezzi, F.; et al.,** (81e:65055a) *and* **Brezzi, F.,** (81e:65055b)

Nédélec, J.-C. *See* **Brezzi, F.; et al.,** (81e:65055a)

65S05 Graphical methods

Kazangapov, A. N. Construction of nomograms in n-dimensional space. (Russian) 81c:65065
A correlation transformation and its application to the construction of three-dimensional nomograms. (Russian) 81c:65066

Mateeva, L. I. *See* **Petrov, R. R.,** 81h:65139

Petrov, R. R. (*with* Ruseva, L. K.) Nomographic representation of some equations with several variables. (Bulgarian. Russian and English summaries) 81f:65095
(*with* Mateeva, L. I.) New classes of equations representable by nomograms with a wavelike contour. (Bulgarian. Russian and English summaries) 81h:65139

Ruseva, L. K. *See* **Petrov, R. R.,** 81f:65095

secondary classifications:

Bopp, Hanspeter (*with* Krauss, Herbert) Iterative Bestimmung des kürzesten Abstandes eines Punktes von einer Parabel. (81g:51002)

Cuvelier, C. Résolution numérique d'un problème de contrôle optimal d'un couplage des équations de Navier-Stokes et celle de la chaleur. (English summary) (81c:49018)

Krauss, Herbert *See* **Bopp, Hanspeter,** (81g:51002)

Pfeiffer, Wayne A graphical method for finding complex roots and its application to plasma physics problems. (81c:76056)

65T05 Harmonic analysis and synthesis

Adel Sharaf, Mohamed On the Λ-transform of the exponential integrals. 81g:65186

Hübler, Albrecht (*with* Klette, Reinhard) Zur parallelen Ausführung der schnellen Fouriertransformation für $N \times N$-Matrizen. (Russian and English summaries) 81i:65110

Kaporin, I. E. A new fast Fourier transform algorithm. (Russian) 81j:65138

Klette, Reinhard *See* **Hübler, Albrecht,** 81i:65110

Környei, I. *See* **Žileikin, Ja. M.,** 81b:65127

Mejran, Zbigniew Error analysis in the fast Fourier transform algorithm for real data. (Polish) 81g:65187

Šmukler, A. I. Approximate calculation of the Fourier transform. (Russian) 81k:65140

Vold, H. Efficient implementation of the discrete Fourier transform analysis of cyclically symmetric structures. 81c:65067

Žileikin, Ja. M. (*with* Környei, I.) An upper estimate of the error of the approximate computation of the Fourier transform on the classes $D_s^{\alpha,\beta,\gamma}(A, B)$. (Russian. English summary) 81b:65127

Zohar, Shalhav ★Faster Fourier transformation: the algorithm of S. Winograd. 81d:65075

secondary classifications:

Bertero, M. (*with* de Mol, C.; Viano, G. A.) On the regularization of linear inverse problems in Fourier optics. (81k:78002)

Elsenfeld, Jerome (*with* Soni, B.) Linear algebraic computational procedures for system identification problems. (81m:92065)

Exton, Harold Basic Fourier series. (81c:33008)

Hübler, Albrecht (*with* Klette, Reinhard) On parallel realization of the fast Fourier transformation of $N \times N$ matrices. (German and Russian summaries) (81k:94006)

Jaroslavskiĭ, L. P. Shifted discrete Fourier transformations. (81g:94008)

Jesshope, C. R. The implementation of fast radix 2 transforms on array processors. (81a:68037)

Klette, Reinhard *See* **Hübler, Albrecht,** (81k:94006)

Lifermann, Jean ★Les méthodes rapides de transformation du signal: Fourier, Walsh, Hadamard, Haar. (French) [Rapid signal transformation methods: Fourier, Walsh, Hadamard, Haar] (81j:94002)

de Mol, C. *See* **Bertero, M.; et al.,** (81k:78002)

Morgera, Salvatore D. Efficient synthesis and implementation of large discrete Fourier transformations. (81e:94002)

Pomraning, G. C. Radiative transfer via spherical harmonics. (81a:82061)

Rose, Donald J. Matrix identities of the fast Fourier transform. (81j:42019)

Soni, B. *See* **Elsenfeld, Jerome,** (81m:92065)

Viano, G. A. *See* **Bertero, M.; et al.,** (81k:78002)

65U05 Numerical methods in probability and statistics

Adomian, G. (*with* Elrod, M.) Generation of a stochastic process with desired first and second order statistics. 81k:65151

Beglaivili, G. A. (*with* Revilvili, L. V.) A numerical method for regularized estimation of the spectral density by means of cubic splines. (Russian. Georgian and English summaries) **81c:65068**
Deutsch, Stuart Jay (*with* Schmeiser, Bruce Wayne) Estimation of the sum of differences distribution. **81k:65152**
Elrod, M. *See* **Adomian, G., 81k:65151**
Gentle, James E. *See* **Kennedy, William J., Jr., (*See* 81k:62127)**
Goldman, André (*with* Visscher, W.) Applications of integral equations in particle-size statistics. **81c:65069**
Kennedy, William J., Jr. (*with* Gentle, James E.) Examining rounding error in least absolute values regression computations. (*See* **81k:62127**)
Meleiko, V. I. Properties of solution estimates for stochastic algebraic equations. (Russian. English summary) **81f:65096**
Revilvili, L. V. *See* **Beglaivili, G. A., 81c:65068**
Schlöglmann, Wolfgang Spline functions and Gaussian processes (multidimensional case). **81c:65070**
Schmeiser, Bruce Wayne *See* **Deutsch, Stuart Jay, 81k:65152**
Schruben, Lee W. A coverage function for interval estimators of simulation response. **81g:65188**
Simons, Stephen The use of polynomials in evaluating certain probabilistic integrals. **81k:65153**
Visscher, W. *See* **Goldman, André, 81c:65069**

secondary classifications:

Armstrong, Ronald D. (*with* Elam, Joyce J.; Hultz, John W.) Obtaining least absolute value estimates for a two-way classification model. (*See* **81h:62127**)
Aslanidi, N. P. Estimation of the error of the method of linear prediction. (Russian. Georgian and English summaries) **(81k:60049)**
Atwood, Corwin L. Convergent design sequences for sufficiently regular optimality criteria. II. Singular case. **(81i:62128)**
Barrodale, I. (*with* Roberts, F. D. K.) Algorithms for restricted least absolute value estimation. (*See* **81h:62127**)
Bharucha-Reid, A. T. (*with* Kannan, Rangachary) Newton's method for random operator equations. **(81m:60121)**
See also **Christensen, Mark J., (81k:60064)**
Browne, M. W. The likelihood ratio test for the equality of correlation matrices. **(81h:62070)**
Christensen, Mark J. (*with* Bharucha-Reid, A. T.) Stability of the roots of random algebraic polynomials. **(81k:60064)**
Elam, Joyce J. *See* **Armstrong, Ronald D.; et al., (*See* 81h:62127)**
Gentle, James E. *See* **Kennedy, William J., Jr., (81g:62005)** *and* **Computations for least absolute values estimation, (81h:62127)**
Gheral, Jugal (*with* Rubin, Herman) Computational procedure for maximum penalized likelihood estimate. **(81c:62043)**
Hryniewicz, Z. An approximation of random field with a bounded discrete parameter space. **(81m:65015)**
Hultz, John W. *See* **Armstrong, Ronald D.; et al., (*See* 81h:62127)**
(Kahn, P. M.) *See* **Computational probability, (81k:60005)**
Kailath, Thomas Some alternatives in recursive estimation. **(81h:93099)**
Kannan, Rangachary *See* **Bharucha-Reid, A. T., (81m:60121)**
Kapustinskas, A. I. Iterative method for the estimation of the parameters of an autoregressive process with trend. (Russian. Lithuanian summary) **(81m:62169a)**
Modification of the iterative method for estimation of the parameters of an autoregressive process with trend (continuation). (Russian. Lithuanian summary) **(81m:62169b)**
Kennedy, William J., Jr. (*with* Gentle, James E.) ★Statistical computing. **(81g:62005)**
Lepp, R. Maximization of a probability function on simple sets. (Russian. Estonian and English summaries) **(81h:90114)**
Marie, Raymond *See* **Stewart, William J., (81m:60171)**
Nagaraja, H. N. Some relations between order statistics generated by different methods. **(81c:62016)**
Narula, Subhash C. (*with* Wellington, John F.) An algorithm for the minimum sum of weighted absolute errors regression. (*See* **81h:62127**)
Roberts, F. D. K. *See* **Barrodale, I., (*See* 81h:62127)**
Römisch, Werner (*with* Schulze, Reinhard) Kennwertmethoden für stochastische Volterrasche Integralgleichungen. (Russian, English and French summaries) **(81m:60120)**
Rubin, Herman *See* **Gheral, Jugal, (81c:62043)**
Săcuiu, Ion (*with* Zorilescu, Dan) ★Numere aleatoare. (Romanian) [Random numbers] **(81k:65012)**
Sampson, Allan R. Nonnegative Cholesky decomposition and its application to association of random variables. **(81j:15026)**
(Schäffer, Karl-August) *See* **Splinefunktionen in der Statistik, (81e:62105)**
Schulze, Reinhard *See* **Römisch, Werner, (81m:60120)**
Stepanov, S. N. Calculation of the correlation function of a Markov process with continuous time and a finite number of states. **(81b:60072)**
Stewart, William J. (*with* Marie, Raymond) A numerical solution for the $\lambda(n)/C_k/r/N$ queue. **(81m:60171)**
Wellington, John F. *See* **Narula, Subhash C., (*See* 81h:62127)**
Zorilescu, Dan *See* **Săcuiu, Ion, (81k:65012)**
Computational probability ★Computational probability. **(81k:60005)**
Computations for least absolute values estimation ★Computations for least absolute values estimation. **(81h:62127)**
Conference:
Actuarial Research, Computational Probability ★Computational probability. **(81k:60005)**
Probability ★Computational probability. **(81k:60005)**
Providence, R.I. ★Computational probability. **(81k:60005)**
Splinefunktionen in der Statistik ★Splinefunktionen in der Statistik. (German) [Spline functions in statistics] **(81e:62105)**
Statistics ★Splinefunktionen in der Statistik. (German) [Spline functions in statistics] **(81e:62105)**

65V05 Automated algorithms [See also 68C05.]

Prusinkiewicz, Przemyslaw (*with* Stepień, Cezary) A digital method of computing the inverse function. (Polish. Russian and English summaries) **81a:65129**
Stepień, Cezary *See* **Prusinkiewicz, Przemyslaw, 81a:65129**

secondary classifications:

Buning, P. G. *See* **Shang, J. S.; et al., (81g:76037)**
Engquist, Björn (*with* Smedsaas, Tom) Automatic computer code generation for hyperbolic and parabolic differential equations. **(81k:65003)**
Hankey, W. L. *See* **Shang, J. S.; et al., (81g:76037)**
Hužanov, U. *See* **Muhidinov, N. M.; et al., (81f:65075)**
Jalali, A. *See* **Rao, K. R.; et al., (81f:68011)**
Muhidinov, N. M. (*with* Sadykov, M. K.; Hužanov, U.) Formalization on a computer of the theory of stability of difference schemes. (Russian) **(81f:65075)**
Rao, K. R. (*with* Jalali, A.; Yip, P.) Rationalized Hadamard-Haar transform. **(81f:68011)**
Sadykov, M. K. *See* **Muhidinov, N. M.; et al., (81f:65075)**
Shang, J. S. (*with* Buning, P. G.; Hankey, W. L.; Wirth, M. C.) Performance of a vectorized three-dimensional Navier-Stokes code on the CRAY-1 computer. **(81g:76037)**
Smedsaas, Tom *See* **Engquist, Björn, (81k:65003)**
Wirth, M. C. *See* **Shang, J. S.; et al., (81g:76037)**
Yip, P. *See* **Rao, K. R.; et al., (81f:68011)**

68–XX COMPUTER SCIENCE (including AUTOMATA) {For papers involving machine computations and programs in a specific mathematical area, see section –04 in that area.}

68–01 Elementary exposition, textbooks

Gotlieb, C. C. (*with* Gotlieb, Leo R.) ★Data types and structures. **81j:68001**
Gotlieb, Leo R. *See* **Gotlieb, C. C., 81j:68001**
Levy, Leon S. ★Discrete structures of computer science. **81a:68001**
Machtey, Michael (*with* Young, Paul) ★An introduction to the general theory of algorithms. **81k:68001**
Page, E. S. (*with* Wilson, L. B.) ★An introduction to computational combinatorics. **81d:68001**
Partee, Barbara Hall ★Fundamentals of mathematics for linguistics. **81h:68001**
Roth, J. Paul ★Computer logic, testing and verification. **81a:68002**
Wand, Mitchell ★Induction, recursion, and programming. **81i:68001**
Wilson, L. B. *See* **Page, E. S., 81d:68001**
Young, Paul *See* **Machtey, Michael, 81k:68001**

secondary classifications:

Backhouse, Roland C. ★Syntax of programming languages. **(81h:68061)**
Bentley, Jon Louis (*with* Saxe, James B.) Generating sorted lists of random numbers. **(81k:65010)**
(Berge, Claude) *See* **Golumbic, Martin Charles, (81e:68081)**
Boyer, Robert S. (*with* Moore, J. Strother) ★A computational logic. **(81d:68127)**
Dörfler, Willibald ★Mathematik für Informatiker. Band 1. (German) [Mathematics for information scientists. Vol. 1] **(81h:00001a)**
★Mathematik für Informatiker. Band 2. (German) [Mathematics for information scientists. Vol. 2] **(81h:00001b)**
Golumbic, Martin Charles ★Algorithmic graph theory and perfect graphs. **(81e:68081)**
Manna, Zohar ★Lectures on the logic of computer programming. **(81e:68005)**
Moore, J. Strother *See* **Boyer, Robert S., (81d:68127)**
Saxe, James B. *See* **Bentley, Jon Louis, (81k:65010)**

68–02 Advanced exposition (research surveys, monographs, etc.)

(Brauer, Wilfried) *See* **Net theory and its applications, 81f:68002**
(van Emde Boas, P.) *See* **Interfaces between computer science and operations research, 81f:68001**
Kobayashi, Hisashi ★Modeling and analysis. **81j:68002**
Kowalski, Robert ★Logic for problem solving. **81j:68003**
Kuznecov, I. P. ★Механизмы обработки семантической информации. (Russian) [Mechanisms for processing semantic information] **81c:68001**
(Lenstra, J. K.) *See* **Interfaces between computer science and operations research, 81f:68001**
Mano, M. Morris ★Digital logic and computer design. **81d:68002**
Pogány, Csaba Some recent problems concerning computers. III. (Hungarian) **81j:68004**
(Rinnooy Kan, A. H. G.) *See* **Interfaces between computer science and operations research, 81f:68001**
Amsterdam ★Interfaces between computer science and operations research. **81f:68001**
Computer science ★Interfaces between computer science and operations research. **81f:68001**
Hamburg ★Net theory and applications. **81f:68002**
Interfaces between computer science and operations research ★Interfaces between computer science and operations research. **81f:68001**
Net theory and its applications ★Net theory and applications. **81f:68002**
Operations research ★Interfaces between computer science and operations research. **81f:68001**

Symposium:
Interfaces between Computer Science and Operations Research ★Interfaces between computer science and operations research. **81f:68001**

secondary classifications:

Winograd, Shmuel ★Arithmetic complexity of computations. **(81k:68039)**

68–03 Historical (must also be assigned at least one classification number from Section 01)

Bauer, Friedrich L. Between Zuse and Rutishauser—the early development of digital computing in Central Europe. (*See* **81i:68002**)
Bigelow, Julian Computer development at the Institute for Advanced Study. (*See* **81i:68002**)
Booth, Andrew D. Computers in the University of London, 1945–1962. (*See* **81i:68002**)
Burks, Arthur W. From ENIAC to the stored-program computer: two revolutions in computers. (*See* **81i:68002**)
Chu, J. C. Computer development at Argonne National Laboratory. (*See* **81i:68002**)
Czauderna, Karl-Heinz ★Konrad Zuse, der Weg zu seinem Computer Z3. (German) [Konrad Zuse, the path to his computer Z3] **81f:68003**
Dijkstra, Edsger W. A programmer's early memories. (*See* **81i:68002**)
Eckert, J. Presper, Jr. The ENIAC. (*See* **81i:68002**)
Eršov, A. P. (*with* Shura-Bura, Mikhail R.) The early development of programming in the USSR. (*See* **81i:68002**)
Everett, Robert R. WHIRLWIND. (*See* **81i:68002**)
Good, I. J. Pioneering work on computers at Bletchley. (*See* **81i:68002**)
Householder, A. S. Reminiscences of Oak Ridge. (*See* **81i:68002**)
(Howlett, J.) *See* **History of computing in the twentieth century, 81i:68002**
Hurd, Cuthbert C. Computer development at IBM. (*See* **81i:68002**)
Huskey, Harry D. The SWAC: the National Bureau of Standards Western Automatic Computer. (*See* **81i:68002**)
Knuth, Donald E. (*with* Trabb Pardo, Luis) The early development of programming languages. (*See* **81i:68002**)
Lavington, Simon H. Computer development at Manchester University. (*See* **81i:68002**)
Lehmer, D. H. A history of the sieve process. (*See* **81i:68002**)
Mauchly, John W. The ENIAC. (*See* **81i:68002**)
Metropolis, N. The MANIAC. (*See* **81i:68002**)
(*with* Worlton, J.) A trilogy on errors in the history of computing. **81a:68003**
See also **History of computing in the twentieth century, 81i:68002**
Pour-El, Marian Boykan Computer science and recursion theory. **81d:68003**
Rajchman, Jan Early research on computers at RCA. (*See* **81i:68002**)
Randell, B. The origins of digital computers: supplementary bibliography. (*See* **81i:68002**)
The COLOSSUS. (*See* **81i:68002**)
Robertson, James E. The ORDVAC and the ILLIAC. (*See* **81i:68002**)
(Rota, Gian-Carlo) *See* **History of computing in the twentieth century, 81i:68002**
Schwartz, Jacob T. The interplay between mathematics and computer science. **81e:68001**
Shura-Bura, Mikhail R. *See* **Eršov, A. P., (*See* 81i:68002)**
Slutz, Ralph J. Memories of the Bureau of Standards' SEAC. (*See* **81i:68002**)
Stibitz, George R. Early computers. (*See* **81i:68002**)
Suekane, Ryota Early history of computing in Japan. (*See* **81i:68002**)
Svoboda, Antonín From mechanical linkages to electronic computers: recollections from Czechoslovakia. (*See* **81i:68002**)
Tomash, Erwin The start of an ERA: Engineering Research Associates, Inc., 1946–1955. (*See* **81i:68002**)
Trabb Pardo, Luis *See* **Knuth, Donald E., (*See* 81i:68002)**
Wells, Mark B. Reflections on the evolution of algorithmic language. (*See* **81i:68002**)
Wilkes, M. V. Early programming developments in Cambridge. (*See* **81i:68002**)
Worlton, J. *See* **Metropolis, N., 81a:68003**
Zuse, Konrad Some remarks on the history of computing in Germany. (*See* **81i:68002**)
See also **Czauderna, Karl-Heinz, 81f:68003**
Bibliography:
Origins of digital computers *See* **Randell, B., (*See* 81i:68002)**
Biography:
Zuse, Konrad *See* **Czauderna, Karl-Heinz, 81f:68003**
Computing ★A history of computing in the twentieth century. **81i:68002**
History of computing in the twentieth century ★A history of computing in the twentieth century. **81i:68002**

secondary classifications:

Backus, John Programming in America in the 1950s—some personal impressions. (*See* **81i:68002**)
Birkhoff, Garrett Computing developments 1935–1955, as seen from Cambridge, U.S.A. (*See* **81i:68002**)
Guter, R. S. (*with* Polunov, Ju. L.) Binary arithmetic in the instrument calculations of John Napier. (Russian) **(81e:01016)**
Hamming, R. W. We would know what they thought when they did it. (*See* **81i:68002**)
(Napier, John) *See* **Guter, R. S.; et al., (81e:01016)**
Polunov, Ju. L. *See* **Guter, R. S., (81e:01016)**
Tropp, Henry S. The Smithsonian computer history project and some personal recollections. (*See* **81i:68002**)
Ulam, S. M. Von Neumann: the interaction of mathematics and computing. (*See* **81i:68002**)
Wilkinson, J. H. Turing's work at the National Physical Laboratory and the construction of pilot ACE, DEUCE, and ACE. (*See* **81i:68002**)
Zemanek, H. Central European prehistory of computing. (*See* **81i:68002**)

68–04 Explicit machine computation and programs (not the theory of computation or programming)

Head, A. K. Multiplication modulo *n*. **81g:68001**

68–06 Proceedings, conferences, etc.

(Aho, Alfred V.) *See* **ACM Symposium: Theory of Computing, 81d:68004**
(Akuševskiĭ, I. Ja.) *See* **Theory of coding and complexity of calculations, 81i:68014**
(Amerbaev, V. M.) *See* **Theory of coding and complexity of calculations, 81i:68014**
(Arató, M.) *See* **Performance of computer systems, 81a:68006**
(Arslanov, M. M.) *See* **Algorithms and automata, 81b:68001**
(de Bakker, J. W.) *See* **Automata, languages and programming, 81i:68004**
(Bauer, Friedrich L.) *See* **Program construction, 81f:68007**
(Bečvář, Jiří) *See* **Mathematical foundations of computer science, 81c:68004**
(Bibel, Wolfgang) *See* **Conference: Automated Deduction, 81i:68006**
(Bjørner, Dines) *See* **Abstract software specifications, 81k:68002**
(Blum, E. K.) *See* **ACM Symposium: Theory of Computing, 81d:68004** *and* **Mathematical studies of information processing, 81f:68006**
(Böhling, K. H.) *See* **Jahrestagung: Gesellschaft für Informatik, 81m:68004**
(Brodlie, K. W.) *See* **Mathematical methods in computer graphics and design, 81i:68010**
(Broy, M.) *See* **Program construction, 81f:68007**
(Buharaev, R. G.) *See* **Probabilistic methods and cybernetics, 81a:68007**
(Butrimenko, A.) *See* **Performance of computer systems, 81a:68006**
(Claus, Volker) *See* **Graph-grammars and their application to computer science and biology, 81a:68005**
(Dekker, L.) *See* **Simulation of systems '79, 81j:68009**
(Dembiński, P.) *See* **Mathematical foundations of computer science, 81k:68003**
(Duce, David A.) *See* **Methodology of interaction, 81i:68011**
(Ehrig, Hartmut) *See* **Graph-grammars and their application to computer science and biology, 81a:68005**
(Finn, Viktor) *See* **Semiotics and information science, 81h:68003**
(Gelenbe, Erol) *See* **Performance of computer systems, 81a:68006**
(Godlevskiĭ, A. B.) *See* **Theoretical questions of design of computer systems, 81j:68011**
(Guedj, Richard A.) *See* **Methodology of interaction, 81i:68011**
(ten Hagen, Paul J. W.) *See* **Methodology of interaction, 81i:68011**
(Hopgood, F. Robert A.) *See* **Methodology of interaction, 81i:68011**
(Kahn, Gilles) *See* **Semantics of concurrent computation, 81e:68002**
(Kogan, B. Ja.) *See* **Modeling languages and software for hybrid computer systems, 81c:68005**
(Kowalski, Robert) *See* **Conference: Automated Deduction, 81i:68006**
(Lavington, Simon H.) *See* **Information processing 80, 81i:68009**
(van Leeuwen, Jan) *See* **Automata, languages and programming, 81i:68004**
(Letičevskiĭ, O. A.) *See* **Theoretical questions of design of computer systems, 81j:68011**
(Lipton, Richard J.) *See* **ACM Symposium: Theory of Computing, 81d:68004**
(Lupanov, O. B.) *See* **Cybernetics collection, 81i:68007** *and* **Cybernetics collection, 81j:68005**
(Maurer, Hermann A.) *See* **Automata, languages and programming, 81c:68002**
(Mayr, Heinrich C.) *See* **Formal model for information systems, 81m:68003**
(Meyer, Bernd E.) *See* **Formal model for information systems, 81m:68003**
(Mihailov, A. I.) *See* **Semiotics and information science, 81h:68003** *and* **Semiotics and information science, 81j:68008**
(Ng, Edward W.) *See* **Symbolic and algebraic computation, 81d:68005**
(Pape, Uwe) *See* **Discrete structures and algorithms, 81m:68002**
(Paul, Manfred) *See* **Mathematical studies of information processing, 81f:68006**
(Pečerskiĭ, Ju. N.) *See* **Design of interpreters, 81m:68001**
(Robinet, Bernard) *See* **Symposium: Programming, 81j:68010**
(Rozenberg, Grzegorz) *See* **Graph-grammars and their application to computer science and biology, 81a:68005**
(Samet, P. A.) *See* **EURO IFIP, 81c:68003**
(Savastano, G.) *See* **Simulation of systems '79, 81j:68009**
(Spies, P. P.) *See* **Jahrestagung: Gesellschaft für Informatik, 81m:68004**
(Takasu, S.) *See* **Mathematical studies of information processing, 81f:68006**
(Tobias, Jeffrey M.) *See* **Language design and programming methodology, 81h:68002**
(Tucker, Hugh A.) *See* **Methodology of interaction, 81i:68011**
(Vansteenkiste, G. C.) *See* **Simulation of systems '79, 81j:68009**
(Weihrauch, Klaus) *See* **Theoretical computer science, 81i:68013**
(Yovits, Marshall C.) *See* **Advances in computers, 81f:68004** *and* **Advances in computers, 81i:68003**
Aachen ★Theoretical computer science. **81i:68013**
Abstract software specifications ★Abstract software specifications. **81k:68002**
ACM Symposium:
Principles of Programming Languages ★Conference Record of the Sixth Annual ACM Symposium on Principles of Programming Languages. **81f:68005**
Theory of Computing ★Conference Record of the Eleventh Annual ACM Symposium on Theory of Computing. **81a:68004**
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Keramidis, Sawwas (*with* Grote, Wolfhart) Beiträge zur Lösung des Verklemmungsproblems in prioritätsfreien Betriebsmittelmaschinen und Petri-Netzen. **(81i:68025)**

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Hebner, E. C. R. (*with* Horspool, R. N. S.) Corrigendum: "A new representation of the rational numbers for fast easy arithmetic" [SIAM J. Comput. 8 (1979), no. 2, 124–134; MR 80h:68027]. **81f:68044**
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Siekmann, Jörg Matching under commutativity. **81g:68052**
Šlangen, Ja. Ja. The serial-parallel method for solving large-scale systems of difference equations in a homogeneous computer network. (Russian) (*See* **81j:93009**)
Slisenko, A. O. Computational complexity of string and graph identification. **81d:68048**
Słomiński, Leon Bottleneck assignment problem: an efficient algorithm. (Polish and Russian summaries) **81b:68038**
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Alt, H. Functions equivalent to integer multiplication. **(81k:68026)**
Baranov, S. I. (*with* Kèèvallik, A. È.) Transformation of graph-schemes of algorithms. (French and German summaries) **(81k:68009)**
Bentley, Jon Louis Decomposable searching problems. **(81c:68075)**
Multidimensional divide-and-conquer. **(81b:68116)**
A parallel algorithm for constructing minimum spanning trees. **(81g:68089)**

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Grunewald, Fritz J. (*with* Segal, Daniel) The solubility of certain decision problems in arithmetic and algebra. (81b:10014)

Hodžajanc, M. Ju. Some characteristics of enumeration operators. (Russian. Armenian and English summaries) (81c:03033)

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Jantke, Klaus-P. Universal methods for identification of total recursive functions. (81c:03032)

Kobuchi, Youichi (*with* Seki, Shigeko) Decision problems of locally catenative property for DIL systems. (81h:68069)

Lewis, Harry R. ★Unsolvable classes of quantificational formulas. (81i:03069)

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Marčenkov, S. S. A basis with respect to superposition in the class of functions that are elementary in the sense of Kalmár. (Russian) (81e:03039)

Nikitčenko, N. S. The equivalence problem in the class of GL(k)-grammars. (Russian) (81c:68069)

Oyamaguchi, Michio (*with* Inagaki, Yasuyoshi; Honda, Namio) On the equivalence problem for two DPDA's, one of which is real-time. (*See* 81i:68009)

Plaisted, David A. On the distribution of independent formulae of number theory. (*See* 81j:68006)

Roizen, S. I. Unsolvability of the additive theory of automata isols over a unary alphabet. (Russian) (81a:03047)

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Sarkisjan, A. D. Realization of arithmetic functions on iterative networks. (Russian. Armenian summary) (81c:03029)

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Ukkonen, Esko A decision method for the equivalence of some non-real-time deterministic pushdown automata. (*See* 81j:68006)

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68C40 Turing machines, abstract processors [See also 03D10.]

Benioff, Paul The computer as a physical system: a microscopic quantum mechanical Hamiltonian model of computers as represented by Turing machines. 81m:68040

Buda, A. A model of computations over a memory with a solvable equivalence problem. (Russian) 81j:68060

Cohen, Rina (*with* Gold, Arie) On the complexity of ω-type Turing acceptors. 81d:68061

Gill, John (*with* Hunt, James; Simon, Janos) Deterministic simulation of tape-bounded probabilistic Turing machine transducers. 81k:68040

Gold, Arie *See* **Cohen, Rina**, 81d:68061

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Hausmann, Dirk (*with* Korte, Bernhard) Computational relations between various definitions of matroids and independence systems. (*See* 81j:49001b)

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Inoue, Katsushi (*with* Takanami, Itsuo) A note on closure properties of the classes of sets accepted by tape-bounded two-dimensional Turing machines. 81i:68071

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secondary classifications:

Angluin, Dana On relativizing auxiliary pushdown machines. **(81l:68053)**
Bel'tjukov, A. P. A computer description and a hierarchy of initial Grzegorczyk classes. (Russian. English summary) **(81c:03030)**
von Braunmühl, Burchard (*with* Verbeek, Rutger) Finite-change automata. **(81j:03062)**
Freivalds, Rūsiņš Running time for deterministic and nondeterministic Turing machines. (Russian) **(81d:03042)**
Galil, Zvi String matching in real time. **(81m:68080)**
Gregušová, Ľudmila (*with* Korec, Ivan) Small universal Minsky machines. **(81g:03042)**
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Lewis, Harry R. (*with* Papadimitriou, Christos H.) Symmetric space-bounded computation (extended abstract). **(81k:68032)**
Marinescu, Daniela A universal Turing machine with three tapes for normal algorithms. (Romanian. French summary) **(81a:03040)**
Papadimitriou, Christos H. *See* **Lewis, Harry R., (81k:68032)**
Paul, Wolfgang J. On time hierarchies. **(81b:03043)**
Priese, Lutz Towards a precise characterization of the complexity of universal and nonuniversal Turing machines. **(81k:03035)**
Schwartz, Jacob T. The interplay between mathematics and computer science. **(81e:68001)**
Siegel, Howard Jay A model of SIMD machines and a comparison of various interconnection networks. **(81a:68113)**
Toffoli, Tommaso Reversible computing. **(81j:68059)**
Verbeek, Rutger *See* **von Braunmühl, Burchard, (81j:03062)**
Wechsung, Gerd A crossing measure for 2-tape Turing machines. **(81e:03034)**
Žák, Stanislav A Turing machine oracle hierarchy. I, II. **(81k:03036)**
Žarov, V. G. Complexity of terms of constructive sequences of Turing machines. (Russian) **(81g:03045)**

68C99 None of the above, but in this section

DeMillo, Richard A. (*with* Lipton, Richard J.) A constructive generalization of the Borel-Cantelli lemma with application to the complexity of infinite strings. **81e:68058**
Grabowski, Jan Miscellaneous results on vector addition systems. **81b:68062**
Lipton, Richard J. *See* **DeMillo, Richard A., 81e:68058**

secondary classifications:

Bergstra, Jan (*with* Tiuryn, Jerzy) Implicit definability of algebraic structures by means of program properties (extended abstract). **(81d:03048)**
Jędrzejowicz, Joanna Inverse derivability and confluence problems of deterministic combinatorial systems. **(81d:03045)**
Knuth, Donald E. The average time for carry propagation. **(81b:68030)**
Maslov, S. Ju. Calculi with monotone deductions and their economic interpretation. (Russian. English summary) **(81g:03030)**
Tiuryn, Jerzy *See* **Bergstra, Jan, (81d:03048)**

68Dxx Automata [See also 03D05, 18B20, 68F10.]

68D05 General theory

Anisimov, P. A. Choice of a sequence of symbols of the input alphabet that maximizes the efficiency of operation of an automaton. (Russian) **81d:68062**
Bilev, G. T. (*with* Kasabov, N. K.) Effective representation of classes of transformations of a finite set and their automaton interpretation. (Russian. Bulgarian and German summaries) **81k:68041**
Engelfriet, Joost Two-way automata and checking automata. **81l:68072**
Feiea, V. Finite automata with a variable structure in *VT*-algebras. **81l:68073**
Gaitanis, N. (*with* Halatsis, C.; Sigala, M.) Fail-safe counters. (French and German summaries) **81b:68063**
Golunkov, Ju. V. (*with* Knjazev, E. A.) Completeness of systems of commands with a finite set of memory states. (Russian) **81h:68035**
Grzymala-Busse, Jerzy W. Selected topics in automata theory. **81l:68074**
Halatsis, C. *See* **Gaitanis, N.; et al., 81b:68063**
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Inoue, Katsushi (*with* Takanami, Itsuo) Closure properties of the classes of sets accepted by automata on a two-dimensional tape under two operations. **81l:68075**
(*with* Takanami, Itsuo) A note on decision problems for three-way two-dimensional finite automata. **81b:68036**
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Kasabov, N. K. *See* **Bilev, G. T., 81k:68041**
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Kurmits, A. Generation of classes of information-lossless automata by means of substitutions of a set of states. **81h:68038**
Levin, V. I. Random logical determinants and consolidated description of the dynamics of finite automata. **81g:68077**
Mikallov, G. N. (*with* Rudnev, V. V.) Simple interconnected graph system and extension of the practical applications of finite automata. **81l:68076**
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Nakajima, Sizuo On completely simple-type automata. **81g:68078**
Nakamura, Akira *See* **Inoue, Katsushi; et al., 81h:68037**
Rudnev, V. V. A finite automaton as a plant. **81l:68079**
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Takanami, Itsuo *See* **Inoue, Katsushi, 81h:68036; Inoue, Katsushi; et al., 81h:68037** *and* **Inoue, Katsushi, 81i:68075**
Topol'skii, N. G. Description and machine decompositional synthesis of digital automata with a large number of states. **81g:68079**
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Čebotarev, A. N. Circuits and automata. II. **(81f:94037)**
Danilov, V. V. (*with* Žirabok, A. N.; Filippov, F. V.) Structural abstract method of design of diagnostic tests for automata. **(81g:94072)**
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Logical determinants and automata with continuous time. III. Automata with memory. **(81b:94068b)**
Sipser, Michael Lower bounds on the size of sweeping automata. **(81l:68068)**
Skovcov, Ju. A. (*with* Speranskii, D. V.) Analytical construction of distinguishing sequences for discrete devices with memory. **(81g:94063)**
Speranskii, D. V. *See* **Skovcov, Ju. A., (81g:94063)**
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68D15 Linear automata, sequential machines

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Bucurescu, Irina On the state minimization of incompletely specified sequential machines. (Romanian summary) **81d:68063**
Ch'ên, Jèn *See* **Das, Sunil R.; et al., 81a:68059** *and* **Das, Sunil R.; et al., 81a:68060**
Dai, Yow Lung *See* **Das, Sunil R.; et al., 81a:68060**
Das, Sunil R. (*with* Ch'ên, Jèn; Wu, S. M.; Lee, Suh Yin; Bhattacharyya, A.) On the design of improved failure detection experiments in synchronous sequential machines based on terminal measurements. **81a:68059**
(*with* Ch'ên, Jèn; Dai, Yow Lung) Easily testable sequential machines with extra inputs and extra outputs. **81a:68060**
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Dobrescu, Radu On linear realization of finite automata. (*See* **81j:93006b**)
Faradžev, R. G. The state space method in problems of synthesis of nonstationary sequential machines. (Russian. Azerbaijani and English summaries) **81g:68080**
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Gordon, Michael J. C. The denotational semantics of sequential machines. **81a:68061**
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Lee, Suh Yin *See* **Das, Sunil R.; et al., 81a:68059**
López Aliguć, J. (*with* Fernández Centeno, M.) Modular synthesis of synchronous sequential machines. (Spanish. English summary) **81j:68066**
Nikolenko, V. M. Realization of automata by asynchronous logical circuits. **81e:68059**
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Saluja, Kewal K. A testable design of sequential machines. **81e:68060**
Synchronous sequential machines: a modular and testable design. **81l:68080**
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Srimani, P. K. (*with* Sinha, B. P.; Pal, A.) Fail-safe realisation of sequential machines with a new two-level MOS module. **81m:68042**
Vâja, Gabriela Minimization algorithms for sequential machines. (Romanian. English summary) **81f:68063**
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Yamamoto, Masaru A method for minimizing incompletely specified sequential machines. **81f:68064**
Yang, T. C. (*with* Wojcik, A. S.) Parallel and serial decompositions of multivalued sequential machines. **81d:68064**

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Andresen, Einar *See* **Kjeldsen, Kjell, (81b:94079)**
Gray, F. Gail *See* **Thompson, Richard A., (81e:94050)**
Kjeldsen, Kjell (*with* Andresen, Einar) Some randomness properties of cascaded sequences. **(81b:94079)**
Thompson, Richard A. (*with* Gray, F. Gail) Universal modular trees: a design procedure. **(81e:94050)**
Vizirev, Ivan S. An iterative approach to the realization of self-checking check circuits for 1-out-of-*n* codes. (Bulgarian. Russian and English summaries) **(81f:94050)**

68D20 Tessellation automata, iterative arrays, cellular structure

Araki, Tatsuo (*with* Noguchi, Shoichi) Bijective global functions of finite cellular automata with complete group-graph connection. **81j:68067**

Bitjuckiĭ, V. P. (*with* Čistov, V. P.) Completeness of simple geometrically homogeneous structures. **81b:68064**
Butler, Jon T. Synthesis of one-dimensional binary cellular automata systems from composite local maps. **81e:68061**
Čistov, V. P. *See* **Bitjuckiĭ, V. P., 81b:68064**
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Dubitzki, Tsvi (*with* Wu, Angela) Cellular *d*-graph automata with augmented memory. **81h:68040**
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Kozen, Dexter Automata and planar graphs. **81d:68065**
Mosbell, J. M. (*with* Rothstein, J.) Bus automata and immediate languages. **81b:68066**
Nakamura, Akira (*with* Inoue, Katsushi) A remark on two-dimensional finite automata: "Some properties of two-dimensional on-line tessellation acceptors" [Inform. Sci. 13 (1977), no. 2, 95–121; MR 80e:68143]. **81i:68082**
Nasu, Masakazu Indecomposable local maps of tessellation automata. **81d:68066**
An interconnection of local maps inducing onto global maps. **81j:68068**
Noguchi, Shoichi *See* **Araki, Tatsuo, 81j:68067**
Paz, Azaria (*with* Raz, Y.) Complexity of pattern generation by MAP-L systems. **81m:68043**
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Rothstein, J. *See* **Mosbell, J. M., 81b:68066**
Seki, Shigeko Real-time recognition of two-dimensional tapes by cellular automata. **81e:68063**
Wu, Angela (*with* Rosenfeld, Azriel) Cellular graph automata. **81c:68041**
(*with* Rosenfeld, Azriel) Cellular graph automata. I. Basic concepts, graph property measurement, closure properties. **81c:68042a**
(*with* Rosenfeld, Azriel) Cellular graph automata. II. Graph and subgraph isomorphism, graph structure recognition. **81c:68042b**
See also **Dubitzki, Tsvi, 81h:68040**

secondary classifications:

Dietz, Paul (*with* Kosaraju, S. Rao) Recognition of topological equivalence of patterns by array automata. **81a:68098**
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Gaitanis, N. (*with* Halatsis, C.; Sigala, M.) Fail-safe counters. (French and German summaries) **81b:68063**
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Merker, Renate Beitrag zur Theorie stochastischer zellularer Systeme. **81m:92002**
Nakamura, Akira (*with* Dyer, Charles R.) Bottom-up cellular pyramids for image analysis. **81d:68125**
Reiod'ko, L. V. (*with* Kolář, Pavel; Kulikova, N. V.) Biological systems of cellular organization and their automata models. (*See* **81j:93007**)
Sigala, M. *See* **Gaitanis, N.; et al., 81b:68063**

68D22 Lindenmayer systems, D0L- and D1L-systems, etc. [See also 68F10, 92A05.]

68D25 Stochastic and nondeterministic automata

Arnaudov, Ja. N. *See* **Topenčarov, Vladimir V.; et al., 81h:68041**
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Čirkov, M. K. On the minimization of partly defined *pi*-automata. (Russian) **81c:68044**
Doberkat, Ernst-Erich Zur Existenz und Berechnung optimaler Vorhersagen für die Ausgabe stochasticher Automaten unter Kompaktheitsbedingungen. (Russian and English summaries) **81e:68064**
Dundua, A. A. (*with* Sapožnikov, V. V.; Sapožnikov, Vl. V.) On coding the states of asynchronous automatic devices by a code with constant weight. (Russian. Georgian and English summaries) **81c:68045**
Freivalds, Rūsiņš Speeding the recognition of certain sets by the use of a random number transducer. (Russian) **81i:68083**
Fujino, Eiichi *See* **Kikuchi, Shigeaki, 81j:68070**
Jantzen, Matthias On zerotesting-bounded multicounter machines. **81j:68069**
Jung, Uwe Analyse-Synthese-Probleme bei linearen nichtdeterministischen Automaten. (Russian and English summaries) **81b:68067**
Jürgensen, Helmut (*with* Tikovsky, H.-D.) Abgeschwächte Observabilitätsbegriffe für stochastische Automaten. **81c:68046**
Kikuchi, Shigeaki (*with* Fujino, Eiichi) Homogeneous decomposition of stochastic automata. **81j:68070**
Kintala, Chandra M. R. (*with* Wotschke, Detlef) Amounts of nondeterminism in finite automata. **81e:68065**
Peeva, Ketty G. *See* **Topenčarov, Vladimir V.; et al., 81h:68041**
Peterson, Gary L. Time-space trade-offs for asynchronous parallel models. Reducibilities and equivalences. **81e:68066**
Pokrovskaja, I. A. Some estimates of the number of states of probabilistic automata representing regular events. (Russian) **81h:68084**
Sapožnikov, V. V. *See* **Dundua, A. A.; et al., 81c:68045**
Sapožnikov, Vl. V. *See* **Dundua, A. A.; et al., 81c:68045**
Tikovsky, H.-D. *See* **Jürgensen, Helmut, 81c:68046**
Topenčarov, Vladimir V. (*with* Arnaudov, Ja. N.; Peeva, Ketty G.) Representation of stochastic automata. (Bulgarian. Russian and English summaries) **81h:68041**
Tyc, Otto On generating substochastic operators in stochastic automata. (Czech. English and Russian summaries) **81h:68042**
Wotschke, Detlef *See* **Kintala, Chandra M. R., 81e:68065**
Yamasaki, Hideki On multitape automata. **81e:68067**

secondary classifications:

Adámek, Jiří *See* **Šedivá-Trnková, Věra, (81b:68069)**
Cocan, Moise On a problem of information theory. (Romanian. German summary) **(81c:94025)**
Duduna, Hans Stochastic cellular automata. **(81i:68081)**
El-Fattah, Yousri M. Stochastic automata modeling of certain problems of collective behavior. **(81i:90209)**
Muhin, V. I. Some properties of one class of control systems that operate in stationary random media. **(81j:93051)**
Pascu, Anca Some properties of TOL systems as models for alive organisms. (*See* **81j:93006b**)
Peeva, Ketty G. *See* **Topenčarov, Vladimir V., (81c:68047)**
Šedivá-Trnková, Věra (*with* Adámek, Jiří) Tree-group automata. **(81b:68069)**
Topenčarov, Vladimir V. (*with* Peeva, Ketty G.) Algebraic theory of stochastic automata —a categorical approach. **(81c:68047)**

68D27 Playing automata, learning automata [See also 90Dxx, 68Gxx.]

Danecki, R. (*with* Karpiński, Marek) Decidability results on plane automata searching mazes. **81d:68068**
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Magott, Jan A parametric automaton as a learning element of a digital computer system. (Polish. Russian and English summaries) **81a:68062**
Reif, John H. Universal games of incomplete information. **81h:68043**
Romanenko, E. V. Basic approaches to algorithms for organizing the choice of continued moves in chess programs. (Russian) **81h:68044**
Tarasenko, G. S. (*with* Èrenštein, M. H.) Study of the convergence of a learning process. (Russian) **81g:68082**

secondary classifications:

Wilson, Manissa J. Dobree Artificial perception in adaptive arrays. **(81a:68094)**

68D30 Algebraic theory of automata [See also 18B20, 20M35.]

Adámek, Jiří *See* **Šedivá-Trnková, Věra, 81b:68069**
Betti, Renato Automata and closed categories. (Italian. English summary) **81f:68065**
Elchner, Lutz The semigroups of linearly realizable finite automata. I, II. **81f:68066**
Ferenci, F. Groupoids of pseudoautomata. **81f:68067**
Gorbuncov, V. V. An algebraic approach to the solution of a class of extremal combinatorial problems. (Russian. English summary) **81d:68069**
Ito, Masami Input sets of strongly connected automata. **81e:68069**
Kawahara, Yasuo Relational tree automata and context-free sets. **81e:68070**
(*with* Yamaguchi, Meiri) Minimal realization theory for tree process machines in monoidal categories. **81f:68068**
Mikołajczak, Bolesław On the simulation problem of a set of automata. **81g:68083**
Morisaki, Masato (*with* Sakai, Ko) A complete axiom system for rational sets with multiplicity. **81j:68071**
Paradis, André D. (*with* Thierrin, Gabriel) Strong endomorphisms of automata. **81b:68068**
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(*with* Mika, Andrzej; Pizoń, Tomasz) An algorithm for deciding the truth of an equation between two arbitrary arithmetic expressions. (Polish. Russian and French summaries) **81i:68121c**

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Turnbull, C. J. M. (*with* Lee, E. Stanley) Generalized deterministic left to right parsing. **81h:68105**
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Boccalatte, A. (*with* Di Manzo, M.) An approach to the detection of semantic errors. **(81k:68010)**
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Kedem, Gershon Automatic differentiation of computer programs. **(81g:68058)**
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Röhrich, Johannes Automatic construction of error correcting parsers in compiler generating systems. (*See* **80c:68002**)
Shyamasundar, R. K. Precedence-regular grammars. **(81e:68095)**
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Lambek, Joachim A mathematician looks at Latin conjugation. **81m:68066**
Šaljapina, Z. M. A formal language for recording interpretations of words and combinations of words. (Russian) **81e:68109**

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Anno, E. I. On the typology of algorithms of syntactic analysis (for formal models of natural language). (Russian. English and German summaries) **(81g:68102)**
Bini, Dario (*with* Lotti, Grazia) Stability of fast algorithms for matrix multiplication. **(81m:65068)**
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Padučeva, E. V. Denotational status of a noun group and its expression in the semantic representation of a sentence. (Russian. English and German summaries) **(81d:68114)**
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68F99 None of the above, but in this section

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68Gxx Artificial intelligence [See also 62H30, 68D27.]

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Nilsson, Nils J. ★Principles of artificial intelligence. **81j:68106**
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secondary classifications:

Simon, Herbert A. The uses of mathematics in the social sciences. **(81k:00013)**

68G05 Learning and adaptive systems

Adel'son-Vel'skiĭ, G. M. (*with* Arlazarov, V. L.; Donskoĭ, M. V.) ★Программирование игр. (Russian) [Game programming] **81b:68106**
Arlazarov, V. L. *See* **Adel'son-Vel'skiĭ, G. M.; et al., 81b:68106**
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Bobrowski, Leon Learning algorithms that converge in a finite number of steps intended for functioning in the presence of noise. (Polish. Russian and English summaries) **81m:68067**
(*with* Caianiello, E. R.) Comparison of two unsupervised learning algorithms. **81g:68117**
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Greblicki, Włodzimierz Learning to recognize patterns with a probabilistic teacher. **81i:68124**
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Guilbaud, G. Th. Note sur les comptabilités markoviennes. (English summary) **81c:68071**
Jouannaud, J. P. (*with* Guiho, G.) Inference of functions with an interactive system. **81g:68118**
Lihovidov, V. N. (*with* Solonin, A. S.; Fomin, V. N.) Convergence of a recurrent algorithm in a self-learning problem. (Russian. English summary) **81h:68084**
Newborn, Monroe M. Recent progress in computer chess. (*See* **81f:68004**)
Pau, L. F. Finite learning sample size problems in pattern recognition. (*See* **80j:68076**)
Schoenborn, Werner (*with* Stanke, Gerd) Convergence properties of adaptive threshold elements in respect to application and implementation. **81d:68120**
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Stanke, Gerd *See* **Schoenborn, Werner, 81d:68120**
Wilson, Manissa J. Dobree Artificial perception in adaptive arrays. **81a:68094**

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Efimov, E. I. Automatic formation of concepts described by closed formulas of the restricted predicate calculus. (Russian) **(81j:03022)**
Èrenšteĭn, M. H. *See* **Tarasenko, G. S., (81g:68082)**
(Golembo, Z. B.) *See* **Engineering cybernetics, (81d:93003)**
Iosifescu, Marius Notes on mathematical learning theory. **(81m:92062)**
Konovalov, M. G. Adaptive control of periodic processes with independent values. **(81b:93083)**
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Tikekar, V. G. *See* **Rangaswamy, S. V.; et al., 81i:68131**

Townley, Judy A. A pragmatic approach to resolution-based theorem proving. **81d:68129**

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Venneri, B. M. Arbres de déduction naturelle et programmation en LCF: possibilités de "normalisation". **81c:68074**

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(Bibel, Wolfgang) *See* **Ben-Ari, Mordechai, (81f:03012)**

de Bruijn, N. G. A survey of the project AUTOMATH. **(81m:03017)**

Doshita, Shuji *See* **Yamasaki, Susumu; et al., (81j:03065)**

Fieschi, M. (*with* Joubert, M.) Application d'une méthode logique à l'aide à la décision en médecine. La méthode de Davis et Putnam en logique propositionnelle. **(81m:92009)**

Hoffmann, Christoph M. Design and correctness of a compiler for a nonprocedural language. **(81e:68028)**

Huet, Gérard (*with* Hullot, Jean-Marie) Proofs by induction in equational theories with constructors. (*See* **81i:68008**)

Hullot, Jean-Marie *See* **Huet, Gérard, (*See* 81i:68008)**

Ishibashi, Toshihiko *See* **Yamasaki, Susumu; et al., (81j:03065)**

Joubert, M. *See* **Fieschi, M., (81m:92009)**

Kowalski, Robert ★Logic for problem solving. **(81j:68003)**

Norgėla, S. A. Herbrand deduction-search strategies in predicate calculus. II. (Russian. Lithuanian and English summaries) **(81b:03013)**

Popov, S. V. *See* **Zahar'jaščev, M. V., (81b:03014)**

Pudlák, Pavel (*with* Springsteel, F. N.) Complexity in mechanized hypothesis formation. **(81b:68054)**

Springsteel, F. N. *See* **Pudlák, Pavel, (81b:68054)**

Statman, Richard Bounds for proof-search and speed-up in the predicate calculus. **(81c:03049)**

Stark, Hans-Georg Remarks on the satisfiability problem of propositional logic. **(81b:68058)**

Yamasaki, Susumu (*with* Ishibashi, Toshihiko; Doshita, Shuji) Unit resolution for a subclass of the Ackermann class. **(81j:03065)**

Zagoruiko, N. G. Methodological premises and problems of the automatic detection of regularities. (Russian) **(81i:00010)**

Zahar'jaščev, M. V. (*with* Popev, S. V.) A deduction search procedure based on the syntactic tree method. (Russian. English summary) **(81b:03014)**

Żeleron, A. P. Decidability of the unification problem for second-order languages with unary functional symbols. **(81h:03028)**

68G20 Problem solving

Averkin, A. N. (*with* Guida, Giovanni; Pospelov, D. A.; Somalvico, Marco) Generalized strategies in problem solvers. **81k:68072**

Bentley, Jon Louis Decomposable searching problems. **81c:68075**

Doyle, Jon A truth maintenance system. **81b:68115**

Giles, Robin A computer program for fuzzy reasoning. **81j:68115**

Guida, Giovanni (*with* Somalvico, Marco) A method for computing heuristics in problem solving. **81i:68132**

(*with* Somalvico, Marco) Algebraic properties of state-space approach to problem solving. **81a:68107**

See also **Averkin, A. N.; et al., 81k:68072**

Korf, Richard E. Toward a model of representation changes. **81h:68093**

Kramosil, Ivan An attempt to formalize the notion of heuristics in state space. **81c:68076**

Kupka, Ingbert Van Wijngaarden grammars as a special information processing model. (*See* **81k:68003**)

Lieberherr, Karl *P*-optimal heuristics. **81a:68108**

Mandrioli, Dino (*with* Sangiovanni-Vincentelli, Alberto; Somalvico, Marco) Toward a theory of problem solving. (*See* **80a:68102**)

McAfee, R. Preston (*with* Whinston, Andrew B.) A formal model of problem solving. **81k:68073**

Ohsuga, Setsuo Towards intelligent interactive systems. **81k:68074**

Pospelov, D. A. *See* **Averkin, A. N.; et al., 81k:68072**

Sangiovanni-Vincentelli, Alberto *See* **Mandrioli, Dino; et al., (*See* 80a:68102)**

Somalvico, Marco *See* **Guida, Giovanni, 81a:68107; Guida, Giovanni, 81i:68132; Averkin, A. N.; et al., 81k:68072** *and* **Mandrioli, Dino; et al., (*See* 80a:68102)**

Stark, William Richard Automatic model construction. **81m:68078**

Stockman, G. C. A minimax algorithm better than alpha-beta? **81d:68130**

Whinston, Andrew B. *See* **McAfee, R. Preston, 81k:68073**

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Chazelle, Bernard (*with* Dobkin, David P.) Decomposing a polygon into its convex parts. **(81i:68044)**

Davis, Martin The mathematics of nonmonotonic reasoning. **(81j:03046)**

Dobkin, David P. *See* **Chazelle, Bernard, (81i:68044)**

Doyle, Jon *See* **McDermott, Drew, (81j:03045)**

McCarthy, John Circumscription—a form of nonmonotonic reasoning. **(81i:03036a)**

Addendum: circumscription and other nonmonotonic formalisms. **(81i:03036b)**

McDermott, Drew (*with* Doyle, Jon) Nonmonotonic logic. I. **(81j:03045)**

Ottendörfer, Wilhelm *See* **Pichler, Franz R., (81c:93012)**

Pichler, Franz R. (*with* Ottendörfer, Wilhelm) Decomposition of general dynamical systems. (Russian summary) **(81c:93012)**

68G99 None of the above, but in this section

Brownell, Hiram H. *See* **Hersh, Harry M.; et al., 81c:68077**

Caramazza, Alfonso *See* **Hersh, Harry M.; et al., 81c:68077**

Freuder, Eugene C. On the knowledge required to label a picture graph. **81j:68116**

Hersh, Harry M. (*with* Caramazza, Alfonso; Brownell, Hiram H.) Effects of context on fuzzy membership functions. **81c:68077**

Malyšev, V. A. (*with* Timofeev, A. V.) Algorithms for construction of programmed manipulator motions with consideration of constructional constraints and obstacles. **81d:68131**

Mihaĭlov, V. M. The representation of surfaces in automatic design systems. (Russian. English summary) **81k:68075**

Schwind, Camilla A formalism for the description of question answering systems. **81i:68133**

Stojan, Ju. G. A generalization of a function of dense packing. (Russian. English summary) **81k:68076**

Suppes, Patrick Current trends in computer-assisted instruction. (*See* **81f:68004**)

Timofeev, A. V. *See* **Malyšev, V. A., 81d:68131**

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Baldwin, J. F. (*with* Guild, N. C. F.) The resolution of two paradoxes by approximate reasoning using a fuzzy logic. **(81m:03031)**

Del Cerro, L. Fariñas La sémantique de logiques non-classiques et la "représentation des connaissances". (English summary) **(81a:03018)**

Guild, N. C. F. *See* **Baldwin, J. F., (81m:03031)**

Kecskés, Zsuzsanna Representation of three-dimensional wire simplexes using line plotters. (Hungarian) **(81k:51002)**

Ladenko, I. S. The logical conception of thought and artificial intelligence. (Russian) **(81j:00019)**

McCarthy, John First order theories of individual concepts and propositions. **(81m:03024)**

Miller, R. L. *See* **Reed, I. S.; et al., (81b:10002)**

Reed, I. S. (*with* Truong, T. K.; Miller, R. L.) A new algorithm for computing primitive elements in the field of Gaussian complex integers modulo a Mersenne prime. **(81b:10002)**

Sloman, Aaron ★The computer revolution in philosophy. **(81i:00007)**

Sowa, John F. Definitional mechanisms for conceptual graphs. **81d:68115)**

Truong, T. K. *See* **Reed, I. S.; et al., (81b:10002)**

Zadeh, L. A. A theory of approximate reasoning. **(81m:03034)**

68H05 Information retrieval

Astrahan, M. M. *See* **Blasgen, M. W.; et al., 81m:68079**

Bentley, Jon Louis Multidimensional divide-and-conquer. **81b:68116**

Berman, William J. *See* **Pfaltz, John L.; et al., 81g:68128**

Blasgen, M. W. (*with* Astrahan, M. M.; Chamberlin, D. D.; Gray, James N.; King, W. F.; Lindsay, B. G.; Lorie, R. A.; Mehl, J. W.; Price, T. G.; Putzolu, G. R.; Schkolnick, M.; Selinger, P. G.; Slutz, D. R.; Strong, H. R.; Traiger, I. L.; Wade, B. W.; Yost, R. A.) System R: an architectural overview. **81m:68079**

Bretholz, E. *See* **Matthews, D.; et al., 81b:68096**

(Byhovskiĭ, V. K.) *See* **Kohonen, Teuvo, 81e:68117**

Cagley, Edgar M. *See* **Pfaltz, John L.; et al., 81g:68128**

Cantone, G. (*with* Fadini, B.) An approach to a model for automatically generating a program's structured maintenance documents. (*See* **81j:68009**)

Chamberlin, D. D. *See* **Blasgen, M. W.; et al., 81m:68079**

Chang, Shi Kuo (*with* Cheng, Wu Haung) A methodology for structured database decomposition. **81b:68117**

See also **Pictorial information systems, 81k:68078**

Cheng, Wu Haung *See* **Chang, Shi Kuo, 81b:68117**

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Forest, Françoise Notion d'information acquise lors du cheminement sur un graphe. (English summary) **81i:68134**

Fredman, Michael L. The inherent complexity of dynamic data structures which accommodate range queries. (*See* **81i:68008**)

(Fu, King Sun) *See* **Pictorial information systems, 81k:68078**

Fukunaga, Kunio (*with* Kasai, Tamotsu) Distributed memory system and its properties. **81h:68094**

Galil, Zvi String matching in real time. **81m:68080**

(*with* Seiferas, Joel I.) Linear-time string-matching using only a fixed number of local storage locations. **81m:68081**

Goto, Eiichi *See* **Gunji, Takao, 81g:68126**

Gray, James N. *See* **Blasgen, M. W.; et al., 81m:68079**

Gunji, Takao (*with* Goto, Eiichi) Studies on hashing. I. A comparison of hashing algorithms with key deletion. **81g:68126**

(Hanani, M. Z.) *See* **Laird, P. D., 81b:68118**

Hoshi, Mamoru *See* **Yuba, Toshitsugu, 81a:68111**

Hosono, C. *See* **Nakamura, Tsuyoshi; et al., 81b:68119**

Ivanov, V. I. Certain possibilities of dynamic data structuring. **81e:68116**

Jaegermann, Michal Information storage and retrieval systems with incomplete information. II. **81a:68109**

Janko, Wolfgang Hierarchic index sequential search with optimal variable block size and its minimal expected number of comparisons. **81f:68114**

Kasai, Tamotsu *See* **Fukunaga, Kunio, 81h:68094**

King, W. F. *See* **Blasgen, M. W.; et al., 81m:68079**

Kohonen, Teuvo ★Ассоциативная память. (Russian) [Associative memory] **81e:68117**

Konikowska, Beata (*with* Traczyk, Tadeusz) Query language of stochastic information systems. **81b:68095**

Laird, P. D. Comment on: "An optimal evaluation of Boolean expressions in an online query system" [Comm. ACM **20** (1977), no. 5, 344–347; MR 55 #9627] by M. Z. Hanani. **81b:68118**

Lindsay, B. G. *See* **Blasgen, M. W.; et al., 81m:68079**

Lipski, Witold, Jr. On an efficient method of information retrieval. **81i:68135**

On databases with incomplete information. **81m:68082**

Lipton, Richard J. (*with* Rosenberg, Arnold L.; Yao, Andrew Chi Chih) External hashing schemes for collections of data structures. **81g:68127**

Lorie, R. A. *See* **Blasgen, M. W.; et al., 81m:68079**

Matthews, D. (*with* Rotem, D.; Bretholz, E.) Self-organizing doubly linked lists. **81b:68096**

Mehl, J. W. *See* **Blasgen, M. W.; et al., 81m:68079**

Mehlhorn, Kurt Dynamic data structures. **81h:68097**

Miller, John R. Use of an infinite-valued propositional calculus in a document retrieval system. **81d:68132**

Mori, H. *See* **Nakamura, Tsuyoshi; et al., 81b:68119**

Nakamura, Tsuyoshi (*with* Hosono, C.; Mori, H.) On the least redundancy problem of the queries of order two in combinatorial filing scheme. **81b:68119**

Pfaltz, John L. (*with* Berman, William J.; Cagley, Edgar M.) Partial-match retrieval using indexed descriptor files. **81g:68128**

Price, T. G. *See* **Blasgen, M. W.; et al., 81m:68079**

Putzolu, G. R. *See* **Blasgen, M. W.; et al., 81m:68079**

Radecki, T. A model of a document retrieval system based on the concept of a semantic disjunctive normal form. **81k:68077**

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Algebraic theory of information search. **81c:68078**

Rosenberg, Arnold L. *See* **Lipton, Richard J.; et al., 81g:68127**

Rotem, D. *See* **Matthews, D.; et al., 81b:68096**

Rytter, Wojciech A correct preprocessing algorithm for Boyer-Moore string-searching. **81g:68129**

Sandberg, G. A primer on relational data base concepts. **81m:68083**

Schader, M. Hierarchical analysis: classification with ordinal object dissimilarities. **81i:68136**
Schkolnick, M. *See* **Blasgen, M. W.; et al., 81m:68079**
Selfera, Joel I. *See* **Galil, Zvi, 81m:68081**
Selinger, P. G. *See* **Blasgen, M. W.; et al., 81m:68079**
Slutz, D. R. *See* **Blasgen, M. W.; et al., 81m:68079**
Strong, H. R. *See* **Blasgen, M. W.; et al., 81m:68079**
Švecov, V. I. Optimal ordering of indexing of fields in a file. (Russian) **81b:68120**
Tošić, Ratko An optimal search procedure. (Serbo-Croatian summary) **81e:68119**
Traczyk, Tadeusz *See* **Konikowska, Beata, 81h:68095**
Traiger, I. L. *See* **Blasgen, M. W.; et al., 81m:68079**
Trmaczyński, Mirosław Once more on storage for consecutive retrieval. **81a:68110**
Wade, B. W. *See* **Blasgen, M. W.; et al., 81m:68079**
Yao, Andrew Chi Chih *See* **Lipton, Richard J.; et al., 81g:68127**
Yost, R. A. *See* **Blasgen, M. W.; et al., 81m:68079**
Yuba, Toshitsugu (*with* Hoshi, Mamoru) Optimum scatter storage tables. **81a:68111**
Information systems ★Pictorial information systems. **81k:68078**
Pictorial information systems ★Pictorial information systems. **81k:68078**

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Ahlswede, Rudolf (*with* Wegener, Ingo) ★Suchprobleme. (German) [Search problems] **(81d:94022)**
Angluin, Dana Finding patterns common to a set of strings. **(81m:68068)**
Baldwin, J. F. Fuzzy logic and its application to fuzzy reasoning. **(81a:03023)**
Békéssy, András Estimation of average length of search on random zero-one matrices. **(81a:68020)**
(Bracchi, G.) *See* **Data base architecture, (81b:68005)**
Bres, E. (*with* Charnes, A.; Cole Eckels, D.; Hitt, S.; Lyders, R.; Rousseau, J.; Russell, K. G.; Schoeman, M.) Costs and their assessment to users of a medical library: a game-theoretic method for allocating joint fixed costs. **(81d:90130)**
Charnes, A. *See* **Bres, E.; et al., (81d:90130)**
Chung, Kin Man (*with* Luccio, Fabrizio; Wong, C. K.) Magnetic bubble memory structures for efficient sorting and searching. (*See* **81i:68009**)
Coffman, E. G., Jr. (*with* So, Kimming; Hofri, Micha; Yao, Andrew Chi Chih) A stochastic model of bin-packing. **(81b:68016)**
Cole Eckels, D. *See* **Bres, E.; et al., (81d:90130)**
Fredman, Michael L. A near optimal data structure for a type of range query problem. **(81d:68031)**
Hatzopoulos, M. (*with* Kollias, J. G.) Some rules for introducing indexing paths in a primary file. **(81g:68028)**
Hitt, S. *See* **Bres, E.; et al., (81d:90130)**
Hofri, Micha *See* **Coffman, E. G., Jr.; et al., (81b:68016)**
Horibe, Yasuichi A note on cost bound of binary search tree. **(81g:68087)**
Iri, Masao *See* **Sugihara, Kokichi, (81b:92028)**
Kollias, J. G. *See* **Hatzopoulos, M., (81g:68028)**
Kondrat'ev, A. I. *See* **Stognii, A. O., (81e:90127)**
Kwong, Y. S. (*with* Wood, Derick) Approaches to concurrency in B-trees. (*See* **81k:68003**)
Lee, D. T. (*with* Wong, C. K.) Voronoĭ diagrams in L_1 (L_∞) metrics with 2-dimensional storage applications. **(81d:68053)**
Lipski, Witold, Jr. (*with* Lodi, Elena; Luccio, Fabrizio; Mugnai, Cristina; Pagli, Linda) On two-dimensional data organization. II. **(81j:68034)**
Lodi, Elena *See* **Lipski, Witold, Jr.; et al., (81j:68034)**
Luccio, Fabrizio *See* **Lipski, Witold, Jr.; et al., (81j:68034)** *and* **Chung, Kin Man; et al.,** (*See* **81i:68009**)
Lyders, R. *See* **Bres, E.; et al., (81d:90130)**
Mehlhorn, Kurt Searching, sorting and information theory. **(81d:68078)**
Mendelson, Haim (*with* Yechiali, Uri) A new approach to the analysis of linear probing schemes. **(81k:68016)**
Mugnai, Cristina *See* **Lipski, Witold, Jr.; et al., (81j:68034)**
(Nijssen, G. M.) *See* **Data base architecture, (81b:68005)**
Pagli, Linda *See* **Lipski, Witold, Jr.; et al., (81j:68034)**
Rayward-Smith, V. J. Optimization problems arising from the incorporation of split values in search trees. **(81m:68050)**
Romani, Francesco (*with* Santoro, N.) On hash techniques in a paged environment. **(81g:68033)**
Rousseau, J. *See* **Bres, E.; et al., (81d:90130)**
Russell, K. G. *See* **Bres, E.; et al., (81d:90130)**
Santoro, N. *See* **Romani, Francesco, (81g:68033)**
Schlageter, G. Enhancement of concurrency in database systems by the use of special rollback methods. (*See* **81b:68005**)
Schoeman, M. *See* **Bres, E.; et al., (81d:90130)**
Silva-Filho, Y. V. Average case analysis of region search in balanced k-d trees. **(81e:68018)**
So, Kimming *See* **Coffman, E. G., Jr.; et al., (81b:68016)**
Stognii, A. O. (*with* Kondrat'ev, A. I.) Strategic representation of knowledge in automated information systems. (Russian. English summary) **(81e:90127)**
Sugihara, Kokichi (*with* Iri, Masao) A mathematical approach to the determination of the structure of concepts. **(81b:92028)**
Tarjan, Robert Endre (*with* Yao, Andrew Chi Chih) Storing a sparse table. **(81e:68019)**
Wang, Jian Fang *See* **Zhu, Yong Jin, (81b:68060)**
Wegener, Ingo *See* **Ahlswede, Rudolf, (81d:94022)**
Wong, C. K. *See* **Lee, D. T., (81d:68053)** *and* **Chung, Kin Man; et al.,** (*See* **81i:68009**)
Wood, Derick *See* **Kwong, Y. S., (*See* 81k:68003)**
Yao, Andrew Chi Chih *See* **Coffman, E. G., Jr.; et al., (81b:68016)** *and* **Tarjan, Robert Endre, (81e:68019)**
Yechiali, Uri *See* **Mendelson, Haim, (81k:68016)**
Zhu, Yong Jin (*with* Wang, Jian Fang) On alphabetic-extended binary trees with restricted path length. **(81k:68060)**
Cachan ★Théorie de l'information. (French) [Information theory] **(81e:94001)**
Colloques Internationaux du Centre National de la Recherche Scientifique ★Théorie de l'information. (French) [Information theory] **(81e:94001)**
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CNRS, Recent Developments in Information Theory and their Applications ★Théorie de l'information. (French) [Information theory] **(81e:94001)**
Data base architecture ★Data base architecture. **(81b:68005)**
IFIP Conference:
Data Base Architecture ★Data base architecture. **(81b:68005)**
Information theory ★Théorie de l'information. (French) [Information theory] **(81e:94001)**
Venice ★Data base architecture. **(81b:68005)**

68Jxx Simulation [See also 65Cxx.]

68J05 Simulation (analog, hybrid, etc.)

(Elzas, Maurice S.) *See* **Methodology in systems modelling and simulation, 81c:68079a**
Jakubowski, Ryszard Extended functional graphs in modeling and simulation of systems. (Polish. English and Russian summaries) **81c:68080**
(Klir, George J.) *See* **Methodology in systems modelling and simulation, 81c:68079a**
Melamed, Benjamin Deterministic system theory applied to simplifications of stochastic systems. **81c:68079b**
Mirenkov, N. N. Process synchronization. **81a:68112**
Necula, Maria-Ana (*with* Tănăsescu, Cristian) Algorithms for determining LEFD which has a given discrete time function as solution. (Romanian summary) **81m:68084**
(Ören, Tuncer I.) *See* **Methodology in systems modelling and simulation, 81c:68079a**
Sedgewick, Robert (*with* Szymanski, Thomas G.) The complexity of finding periods. **81d:68133**
Siegel, Howard Jay A model of SIMD machines and a comparison of various interconnection networks. **81a:68113**
Szymanski, Thomas G. *See* **Sedgewick, Robert, 81d:68133**
Tănăsescu, Cristian *See* **Necula, Maria-Ana, 81m:68084**
(Zeigler, Bernard P.) *See* **Methodology in systems modelling and simulation, 81c:68079a**
Methodology in systems modelling and simulation ★Methodology in systems modelling and simulation. **81c:68079a**
Modeling ★Methodology in systems modelling and simulation. **81c:68079a**
Rehovot ★Methodology in systems modelling and simulation. **81c:68079a**
Simulation ★Methodology in systems modelling and simulation. **81c:68079a**
Symposium:
Modelling and Simulation Methodology ★Methodology in systems modelling and simulation. **81c:68079a**

secondary classifications:

Adomian, G. (*with* Elrod, M.) Generation of a stochastic process with desired first and second order statistics. **(81k:65151)**
Bandyopadhyay, Subir *See* **De, Nanda Kisor; et al., (81b:68002)**
Carson, John S. (*with* Law, Averill M.) Conservation equations and variance reduction in queueing simulations. **(81j:65023)**
De, Nanda Kisor (*with* Sengupta, Abhijit; Bandyopadhyay, Subir; Srimani, Pradip K.) On certain investigations on self-diagnosable systems. **(81b:68002)**
Dwyer, Thomas A. W., III *See* **de Figueiredo, Rui J. P., (81j:93031)**
Elrod, M. *See* **Adomian, G., (81k:65151)**
de Figueiredo, Rui J. P. (*with* Dwyer, Thomas A. W., III) A best approximation framework and implementation for simulation of large-scale nonlinear systems. **(81j:93031)**
Fishman, George S. Sampling from the binomial distribution on a computer. **(81c:65009)**
Franta, V. *See* **Kuneš, J., (81m:00014)**
Gerhardt, Hans-Detlef (*with* Schwarze, Gunter) Simulation—Begriffe und Benennungen. (Russian, English and French summaries) **(81g:00008)**
Hayya, Jack C. *See* **Sullivan, Robert S., (81d:90064)**
Hill, G. W. Cyclic properties of pseudorandom sequences of Mersenne prime residues. **(81a:65014)**
Kerckhoffs, E. J. H. Parallel simulation/a survey of local research. (*See* **81j:93009**)
Kronmal, Richard A. (*with* Peterson, Arthur V., Jr.) On the alias method for generating random variables from a discrete distribution. **(81c:65010)**
Kuneš, J. (*with* Franta, V.) Some aspects in modeling and systems simulation. **(81m:00014)**
Kurinckx, A. (*with* Pujolle, Guy) Analytic methods for multiprocessor system modelling. **(81d:68052)**
Law, Averill M. *See* **Carson, John S., (81j:65023)**
Malyšev, V. A. (*with* Timofeev, A. V.) Algorithms for construction of programmed manipulator motions with consideration of constructional constraints and obstacles. **(81d:68131)**
Nevalainen, Olli (*with* Teuhola, Jukka) The efficiency of two indexed priority queue algorithms. **(81i:68050)**
Niki, Naoto Machine generation of random numbers. (Japanese. English summary) **(81e:65004)**
Peterson, Arthur V., Jr. *See* **Kronmal, Richard A., (81c:65010)**
Pujolle, Guy *See* **Kurinckx, A., (81d:68052)**
Schwarze, Gunter *See* **Gerhardt, Hans-Detlef, (81g:00008)**
Sengupta, Abhijit *See* **De, Nanda Kisor; et al., (81b:68002)**
Srimani, Pradip K. *See* **De, Nanda Kisor; et al., (81b:68002)**
Sullivan, Robert S. (*with* Hayya, Jack C.) A comparison of the method of bounding distributions (MBD) and Monte Carlo simulation for analyzing stochastic acyclic networks. **(81d:90064)**
Teuhola, Jukka *See* **Nevalainen, Olli, (81i:68050)**
Timofeev, A. V. *See* **Malyšev, V. A., (81d:68131)**

van Tits, Martien (*with* van der Veeken, Henk) Simulation of a queueing problem with balking. **(81h:90063)**
van der Veeken, Henk *See* **van Tits, Martien, (81h:90063)**
Zeigler, Bernard P. Modelling and simulation methodology: state of the art and promising directions. **(81m:00018)**

68J10 Modeling

Bisschop, Johannes (*with* Meeraus, Alexander) Selected aspects of a general algebraic modeling language. (*See* **81j:49001b**)
Edwards, William R. (*with* Katz, Edward P.) An abstract model of relational algorithms. **81d:68134**
Kallianer, A. Software design for algorithms of hierarchical optimization. (*See* **81j:49001b**)
Kallio, Kari Outlines for a general mathematical modeling software. (*See* **81j:49001b**)
Katz, Edward P. *See* **Edwards, William R., 81d:68134**
Kickert, Walter J. M. Towards an analysis of linguistic modelling. **81d:68135**
Krafi, Norbert (*with* Wedde, Horst) Inducing patterns of behaviour in distributed system parts. (*See* **81k:68003**)
Liu, Kuen Y. *See* **Malek, Miroslaw, 81a:68114**
Maklad, Maher S. (*with* Nichols, S. T.) A new approach to model structure discrimination. **81b:68121**
Malek, Miroslaw (*with* Liu, Kuen Y.) Graph theory models in fault diagnosis and fault tolerance. **81a:68114**
Meeraus, Alexander *See* **Bisschop, Johannes, (*See* 81j:49001b)**
Nichols, S. T. *See* **Maklad, Maher S., 81b:68121**
Podsiadlo, Antoni (*with* Sobociński, Jacek) Streams of information in the process of systematic modelling of complex technical objects on the example of vessel engines. (*See* **81j:49001b**)
Schwarze, Gunter Towards software for modeling and simulation. (*See* **81j:93009**)
Sobociński, Jacek *See* **Podsiadlo, Antoni, (*See* 81j:49001b)**
Tong, Richard M. The construction and evaluation of fuzzy models. **81a:68115**
Wedde, Horst *See* **Kraft, Norbert, (*See* 81k:68003)**

secondary classifications:

Adel'son-Vel'skiĭ, G. M. (*with* Arlazarov, V. L.; Donskoĭ, M. V.) ★Программирование игр. (Russian) [Game programming] **(81b:68106)**
Aĭzerman, M. A. (*with* Mališevskiĭ, A. V.) ★Choice of best variants: some aspects of general theory. **(81b:90012)**
Arlazarov, V. L. *See* **Adel'son-Vel'skiĭ, G. M.; et al., (81b:68106)**
Boguslavskiĭ, L. B. (*with* Gelenbe, Erol) A communication protocol and a problem of coupled queues. **(81d:68050)**
Donskoĭ, M. V. *See* **Adel'son-Vel'skiĭ, G. M.; et al., (81b:68106)**
Gelenbe, Erol *See* **Boguslavskiĭ, L. B., (81d:68050)**
Hofri, Micha (*with* Tzelnic, P.) On the working set size for the Markov chain model of program behaviour. **(81d:68013)**
Kobayashi, Hisashi ★Modeling and analysis. **(81j:68002)**
Kohout, Ladislav J. Analysis of computing protection structures by means of multivalued logic systems. **(81d:68007)**
Lucena, Carlos J. *See* **Maibaum, T. S. E., (81d:68034)**
Maibaum, T. S. E. (*with* Lucena, Carlos J.) Higher order data types. **(81d:68034)**
Mališevskiĭ, A. V. *See* **Aĭzerman, M. A., (81b:90012)**
Minjaeva, L. N. (*with* Sabinin, O. Ju.) Adaptive statistical modelling algorithms for stochastic control systems. **(81j:93070)**
Pogosjan, È. M. On the classification of description decoding problems. (Russian. Armenian summary) **(81e:68052)**
Reiser, M. Mean value analysis of queuing networks—a new look at an old problem. **(81b:68041)**
Rine, David Possibility theory: as a means for modeling computer security and protection. **(81d:68009)**
Sabinin, O. Ju. *See* **Minjaeva, L. N., (81j:93070)**
Savitch, Walter J. Graphs of processors. **(81d:68039)**
von Solms, S. H. Modelling the growth of simple biological organisms using formal language theory. **(81j:92007)**
Török, T. L. Interleaved memory systems with Markovian requests. **(81d:68011)**
Tzelnic, P. *See* **Hofri, Micha, (81d:68013)**
Val'kovskiĭ, V. A. Computations with prediction. **(81a:68033)**
Wenstop, Fred Exploring linguistic consequences of assertions in social sciences. **(81h:92034)**

68J99 None of the above, but in this section

secondary classifications:

Banjević, D. (*with* Ivković, Z.) On algorithmical testing tables of random numbers. **(81a:65013)**
Ivković, Z. *See* **Banjević, D., (81a:65013)**

68K05 Miscellaneous applications of computers

Brodlie, K. W. A review of methods for curve and function drawing. (*See* **81i:68010**)
Guibas, Leo J. (*with* Yao, F. Frances) On translating a set of rectangles. (*See* **81j:68006**)
Kling, Rob (*with* Scacchi, Walt) Computing as social action: the social dynamics of computing in complex organizations. (*See* **81i:68003**)
McLain, D. H. Interpolation methods for erroneous data. (*See* **81i:68010**)
Sabin, M. A. Contouring—a review of methods for scattered data. (*See* **81i:68010**)
Scacchi, Walt *See* **Kling, Rob, (*See* 81i:68003)**
Sutcliffe, D. C. Contouring over rectangular and skewed rectangular grids—an introduction. (*See* **81i:68010**)
Todoroĭ, D. N. *See* **Zabolotnyĭ, P. A., 81d:68136**
Yao, F. Frances *See* **Guibas, Leo J., (*See* 81j:68006)**
Zabolotnyĭ, P. A. (*with* Todoroĭ, D. N.) Geometric problems of computer graphics. (Russian) **81d:68136**

secondary classifications:

Braid, I. C. (*with* Hillyard, R. C.; Stroud, I. A.) Stepwise construction of polyhedra in geometric modelling. (*See* **81i:68010**)
Hillyard, R. C. *See* **Braid, I. C.; et al., (*See* 81i:68010)**
Lee, D. T. (*with* Schachter, B. J.) Two algorithms for constructing a Delaunay triangulation. **(81m:52001)**
Pieprzyk, Józef Random Vigener ciphers and their application in computer systems. (Polish. Russian and English summaries) **(81k:94040)**
Schachter, B. J. *See* **Lee, D. T., (81m:52001)**
Stroud, I. A. *See* **Braid, I. C.; et al., (*See* 81i:68010)**

70–XX MECHANICS OF PARTICLES AND SYSTEMS {For relativistic mechanics, see 83A05 and 83C10; for statistical mechanics, see 82–XX.}

70–01 Elementary exposition, textbooks

secondary classifications:

Dym, Clive L. (*with* Ivey, Elizabeth S.) ★Principles of mathematical modeling. **(81c:00011)**
Ivey, Elizabeth S. *See* **Dym, Clive L., (81c:00011)**
Kolešnik, Jaroslav ★Kmitání mechanických soustav. (Czech) [Vibration of mechanical systems] **(81j:73030)**
Ljubič, Ju. I. (*with* Šor, L. A.) ★The kinematic method in geometrical problems. **(81m:51029)**
(Šokurov, Vladimir) *See* **Ljubič, Ju. I.; et al., (81m:51029)**
Šor, L. A. *See* **Ljubič, Ju. I., (81m:51029)**

70–02 Advanced exposition (research surveys, monographs, etc.)

Bottema, Oene (*with* Roth, B.) ★Theoretical kinematics. **81e:70001**
Goldstein, Herbert ★Classical mechanics. **81j:70001**
Kijowski, Jerzy (*with* Tulczyjew, Włodzimierz M.) ★A symplectic framework for field theories. **81m:70001**
Roth, B. *See* **Bottema, Oene, 81e:70001**
Tulczyjew, Włodzimierz M. *See* **Kijowski, Jerzy, 81m:70001**

secondary classifications:

Abraham, Ralph (*with* Marsden, Jerrold E.) ★Foundations of mechanics. **(81e:58025)**
Ančev, Atanas (*with* Rumjancev, V. V.) On the dynamics and stability of gyrostats. (Russian. English summary) **(81e:70004)**
Černous'ko, F. L. Optimal control of mechanical systems. (Russian) **(81e:49001)**
(Cushman, Richard) *See* **Abraham, Ralph; et al., (81e:58025)**
Kolesov, Ju. S. (*with* Švitra, Donatas) ★Автоколебания в системах с запаздыванием. (Russian) [Self-oscillation in systems with lags] **(81f:34071)**
Marsden, Jerrold E. *See* **Abraham, Ralph, (81e:58025)**
(Raţiu, Tudor) *See* **Abraham, Ralph; et al., (81e:58025)**
Rumjancev, V. V. *See* **Ančev, Atanas, (81e:70004)**
Švitra, Donatas *See* **Kolesov, Ju. S., (81f:34071)**

70–03 Historical (must also be assigned at least one classification number from Section 01)

secondary classifications:

Fradlin, B. N. *See* **Grigor'jan, A. T., (81m:01032)**
Freiesleben, Hans-Christian ★Geschichte der Navigation. (German) [The history of navigation] **(81h:01001)**
Grigor'jan, A. T. (*with* Fradlin, B. N.) Über die Entwicklung der Mechanik nichtholonomer Systeme in den Arbeiten deutscher Wissenschaftler. **(81m:01032)**
Kirchgraber, Urs *See* **Szebehely, Victor; et al., (81a:01042)**
Kononenko, T. I. Fundamental notions of the theory of higher-order accelerations in the works of 19th century scientists. (Russian. English summary) **(81m:01035)**
(Lambert, Johann Heinrich) *See* **Volk, O., (81e:01018)**
Rosenkrantz, Roger D. The Copernican revelation. **(81m:01010)**
Saari, Donald G. *See* **Szebehely, Victor; et al., (81a:01042)**
(Stiefel, Eduard L.) *See* **Szebehely, Victor; et al., (81a:01042)**
Szebehely, Victor (*with* Saari, Donald G.; Waldvogel, J.; Kirchgraber, Urs) Eduard L. Stiefel (1909–1978). **(81a:01042)**
Volk, O. Johann Heinrich Lambert and the determination of orbits for planets and comets. (German summary) **(81e:01018)**
Waldvogel, J. *See* **Szebehely, Victor; et al., (81a:01042)**
Bibliography:
Lambert, Johann Heinrich *See* **Volk, O., (81e:01018)**
Biography:
Lambert, Johann Heinrich *See* **Volk, O., (81e:01018)**
Obituary:
Stiefel, Eduard L. *See* **Szebehely, Victor; et al., (81a:01042)**

70–04 Explicit machine computation and programs (not the theory of computation or programming)

70–05 Experimental papers

70–06 Proceedings, conferences, etc.

(Mihailov, G. K.) *See* **General mechanics, 81d:70001**
(Novožilov, V. V.) *See* **Mechanics of controllable motion, 81c:70002**
(Pisarenko, G. S.) *See* **Current problems in theoretical and applied mechanics, 81b:70001**
(Sedov, L. I.) *See* **General mechanics, 81d:70001**
All-Union Congress:
Theoretical and Applied Mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **81b:70001**
Celestial mechanics ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. **81a:70001a**
★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. **81a:70001b**
Conference:
Mathematical Methods in Celestial Mechanics ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. **81a:70001a**
★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. **81a:70001b**
Current problems in theoretical and applied mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **81b:70001**
General mechanics ★Общая механика. Том 4. (Russian) [General mechanics. Vol. 4] **81d:70001**
Itogi Nauki i Tehniki ★Общая механика. Том 4. (Russian) [General mechanics. Vol. 4] **81d:70001**
Kiev ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **81b:70001**
Mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **81b:70001**
★Общая механика. Том 4. (Russian) [General mechanics. Vol. 4] **81d:70001**
Mechanics of controllable motion ★Механика управляемого движения. (Russian) [Mechanics of controllable motion] **81c:70002**
Oberwolfach ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. **81a:70001a**
★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. **81a:70001b**
Proceedings:
Conference on Mathematical Methods in Celestial Mechanics ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. **81a:70001a**
★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. **81a:70001b**

secondary classifications:

(Boiti, M.) *See* **Nonlinear evolution equations and dynamical systems, (81f:35004)**
(Kolesov, Ju. S.) *See* **Studies in stability and the theory of oscillations, (81e:34006)**
(Pempinelli, F.) *See* **Nonlinear evolution equations and dynamical systems, (81f:35004)**
(Soliani, G.) *See* **Nonlinear evolution equations and dynamical systems, (81f:35004)**
Dynamical systems ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**
Lecce ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**
Meeting:
Nonlinear Evolution Equations and Dynamical Systems ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**
Nonlinear evolution equations and dynamical systems ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**
Oscillations ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] **(81e:34006)**
Stability ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] **(81e:34006)**
Studies in stability and the theory of oscillations ★Исследования по устойчивости и теории колебаний. (Russian) [Studies in stability and the theory of oscillations] **(81e:34006)**

70A05 Axiomatics, foundations

Woźniak, Czesław Abstract constraints in Newtonian mechanics. I. General foundations. (Russian summary) **81e:70001**

secondary classifications:

Barberis, B. (*with* Galletto, Dionigi) Foundations of Newtonian cosmology. **(81e:85006)**
Domingos, J. M. Time reversal in classical and quantum mechanics. **(81e:81003)**
Galletto, Dionigi *See* **Barberis, B., (81e:85006)**
Giovannini, N. (*with* Piron, Constantin) On the group-theoretical foundations of classical and quantum physics: kinematics and state spaces. **(81e:81005)**
Kijowski, Jerzy (*with* Tulczyjew, Włodzimierz M.) ★A symplectic framework for field theories. **(81m:70001)**
Piron, Constantin *See* **Giovannini, N., (81e:81005)**
Tulczyjew, Włodzimierz M. *See* **Kijowski, Jerzy, (81m:70001)**

70Bxx Kinematics [See also 53A17.]

70B05 Kinematics of a particle

70B10 Kinematics of a rigid body

Hacısalihoğlu, H. Hilmi The consequences of Meusnier's theorem and the real spherical motions. (Turkish summary) **81a:70002**

secondary classifications:

Firey, Wm. J. Inner contact measures. **(81k:52009)**
Kallenberg, G. W. M. On a set of isometries in E^n. **(81d:51009)**
Rosenberg, Ivo G. Structural rigidity of bar & joint and cabled frameworks. **(81c:51021)**

70B15 Mechanisms and linkages

Abdrašev, S. Ž. Methods of determining equalizing forces of plane lever mechanisms of higher classes. (Russian) **81f:70001**
Akulenko, L. D. (*with* Bolotnik, N. N.) Shock absorption for rotating parts of mechanisms. **81c:70003**
B"čvarov, S. N. (*with* Peĭkova, M. D.) Dynamics of a two-dimensional anthropomorphic model of a robot with two-legged locomotion. (Bulgarian. Russian and English summaries) **81m:70002**
Bolotnik, N. N. *See* **Akulenko, L. D., 81c:70003**
Cenov, P. Application of the theory of distribution of extreme values in mechanisms with passive linkages. (Bulgarian. Russian and German summaries) **81j:70002**
Dragomirov, T. *See* **Genova, P., 81c:70002**
Esčev, K. A property of geometric relationships determined from kinematic schemes of plane lever mechanisms that facilitates their multiple differentiation. (Bulgarian. Russian and English summaries) **81c:70004**
Formal'skiĭ, A. M. *See* **Vasenin, V. A.; et al., 81e:70003**
Galletti, Carlo (*with* Rossi, Aldo) Remarks on the positional analysis of the articulated quadrilateral. (Italian. English and French summaries) **81m:70003**
Gasurekeli, S. I. Two-dimensional analogues of three-dimensional four-component mechanisms. (Russian) **81k:70001**
Genova, P. (*with* Dragomirov, T.) Synthesis of a linkage mechanism for a load-switching regulator with four-link kinematic linkage. (Russian. English summary) **81e:70002**
Kazybanov, H. R. (*with* Tilemisov, S. T.) Kinematic analysis of mechanisms of higher classes by means of graph theory. (Russian) **81m:70004**
Luh, J. Y. S. (*with* Walker, M. W.; Paul, R. P. C.) On-line computational scheme for mechanical manipulators. **81g:70001**
Paul, R. P. C. *See* **Luh, J. Y. S.; et al., 81g:70001**
Peĭkova, M. D. *See* **B"čvarov, S. N., 81m:70002**
Rapcsák, Tamás The optimal power transmission of mechanical speed gear. (Hungarian. English summary) **81b:70002**
Rossi, Aldo *See* **Galletti, Carlo, 81m:70003**
Schöne, Wolfgang Über die Koppelkurve des ebenen Viergelenkgetriebes. **81d:70002**
Tilemisov, S. T. *See* **Kazybanov, H. R., 81m:70004**
Vasenin, V. A. (*with* Velerštein, R. A.; Formal'skiĭ, A. M.) Locomotion of anthropomorphic mechanisms in the presence of pulse actions. (Russian) **81e:70003**
Velerštein, R. A. *See* **Vasenin, V. A.; et al., 81e:70003**
Walker, M. W. *See* **Luh, J. Y. S.; et al., 81g:70001**

secondary classifications:

Arnaudov, K. *See* **B"čvarov, S. N., (81i:70015a)** *and* **B"čvarov, S. N., (81i:70015b)**
B"čvarov, S. N. (*with* Arnaudov, K.) Differential equations of the motion of a "simple" automobile with account of the interaction with the motor. (Bulgarian. Russian and English summaries) **(81i:70015a)**
(*with* Arnaudov, K.) Single-frequency forced oscillations of a "simple" automobile. (Bulgarian. Russian and German summaries) **(81i:70015b)**
Bolotin, Ju. V. Separation of motions in the problem of control of mechanical systems with one-sided constraints. (Russian. English summary) **(81g:93049)**
Bordjug, B. A. Stabilization of the horizontal motion of a four-legged walking apparatus. (Russian) **(81h:93079)**
Davitašvili, N. S. *See* **Tavhelidze, D. S., (81j:53011)**
Gerenštein, A. V. Isometric immersions and synthesis of inertial mechanisms. (Russian) **(81h:53018)**
Haug, Edward J. *See* **Song, Ji Oh, (81k:73051)**
Hemami, H. (*with* Wyman, B. F.) Indirect control of the forces of constraint in dynamic systems. **(81a:93045)**
Kipšidze, K. S. *See* **Surabšvili, L. A., (81c:51029)**
Larin, V. B. Stabilization of the horizontal motion of a two-legged walking apparatus. (Russian) **(81j:93046)**
Nguyen Van Khang Zur Berechnung der dynamischen Stabilitätsbedingungen und periodischen Schwingungen des Gestells ebener Mechanismen. **(81i:70012)**
Song, Ji Oh (*with* Haug, Edward J.) Dynamic analysis of planar flexible mechanisms. **(81k:73051)**
Surabšvili, L. A. (*with* Kipšidze, K. S.) Ein Beitrag zur Untersuchung eines räumlichen fünfgliedrigen Getriebes. **(81c:51029)**
Tavhelidze, D. S. (*with* Davitašvili, N. S.) Determination of the link dimensions of a plane five-linked hinged mechanism. (Russian. Georgian and English summaries) **(81j:53011)**
Wunderlich, Walter Eine merkwürdige Familie von beweglichen Stabwerken. **(81e:51011)**
Wyman, B. F. *See* **Hemami, H., (81a:93045)**

70B99 None of the above, but in this section

Fernandez-Sintes, Julio *See* **Hoff, Nicholas J., 81m:70005**
Funabashi, Hiroaki *See* **Horie, Mikio; et al., 81m:70006**
Haug, Edward J. (*with* Wehage, Roger A.) Computer-aided analysis of mechanical systems with intermittent motion. (*See* **81m:00008**)
Hoff, Nicholas J. (*with* Fernandez-Sintes, Julio) Kinematically unstable space frameworks. **81m:70005**
Horie, Mikio (*with* Funabashi, Hiroaki; Ogawa, Kiyoshi; Kobayashi, Hiroshi) A displacement analysis of plane multilink mechanisms with clearances and tolerances. **81m:70006**
Hughes, Peter C. Dynamics of a chain of flexible bodies. **81d:70003**
Huston, Ronald L. (*with* Passerello, Chris E.) Multibody structural dynamics including translation between the bodies. **81m:70007**
Kobayashi, Hiroshi *See* **Horie, Mikio; et al., 81m:70006**
Lebedev, P. A. (*with* Luck, Kurt) Zur Theorie sphärischer kinematischer Paare mit Stift. **81m:70008**
Luck, Kurt *See* **Lebedev, P. A., 81m:70008**
Ogawa, Kiyoshi *See* **Horie, Mikio; et al., 81m:70006**
Passerello, Chris E. *See* **Huston, Ronald L., 81m:70007**
Wehage, Roger A. *See* **Haug, Edward J.,** (*See* **81m:00008**)

secondary classifications:

Arimoto, Suguru *See* **Miyazaki, Fumio, (81k:93049)**
Bottema, Oene (*with* Roth, B.) ★Theoretical kinematics. **(81e:70001)**
Georgiev, Georgi Iv. (*with* Ignat, Margareta) On the flow and current lines of some significant motions in continuum kinematics. (Italian) **(81m:53010)**
Ignat, Margareta *See* **Georgiev, Georgi Iv., (81m:53010)**
Ljubič, Ju. I. (*with* Šor, L. A.) ★The kinematic method in geometrical problems. **(81m:51029)**
Lübbert, Christoph Über kinematische Geradenabbildungen. **(81k:53003)**
McMahon, Thomas A. *See* **Mochon, Simon, (81j:92013)**
Miyazaki, Fumio (*with* Arimoto, Suguru) A control theoretic study on dynamical biped locomotion. **(81k:93049)**
Mochon, Simon (*with* McMahon, Thomas A.) Ballistic walking: an improved model. **(81j:92013)**
Roth, B. *See* **Bottema, Oene, (81c:70001)**
(Šokurov, Vladimir) *See* **Ljubič, Ju. I.; et al., (81m:51029)**
Šor, L. A. *See* **Ljubič, Ju. I., (81m:51029)**
Sörensen, Kay Projektive Abschließbarkeit von kinematischen Räumen. (English summary) **(81c:51025)**

70Cxx Statics

70C05 Forces, fields

70C10 Potential energy

70C99 None of the above, but in this section

secondary classifications:

Zeeman, E. C. Catastrophe theory. **(81k:58018)**

70Dxx Dynamics of a particle [See also 70Hxx.]

70D05 Newtonian dynamics

Arnow, M. Particle trajectories in $1/r$ fields. **81k:70002**
Broucke, R. Notes on the central force r^n. **81k:70003**
Frischbier, Reinhard Zur Theorie des Körperstoßes. **81k:70004**
Tallaferro, Steven D. Stability for two-dimensional analytic potentials. **81d:70004**
Woźniak, Czesław Abstract constraints in Newtonian mechanics. II. Special cases. (Russian summary) **81f:70002**

secondary classifications:

Geršman, M. D. (*with* Nagaev, R. F.) The oscillation brachistochrone problem. **(81f:49027)**
Klimko, A. S. Louden's method of optimization in arbitrary central fields. (Russian) **(81d:90118)**
Nagaev, R. F. *See* **Geršman, M. D., (81f:49027)**
Woźniak, Czesław Nonstandard analysis and its application to mechanics. **(81e:03065)**
Abstract constraints in Newtonian mechanics. I. General foundations. (Russian summary) **(81e:70001)**

70D10 Lagrangian dynamics

secondary classifications:

Benenti, Sergio (*with* Tulczyjew, Włodzimierz M.) Geometry of static mechanical systems with constraints. **(81m:58031)**
Tulczyjew, Włodzimierz M. *See* **Benenti, Sergio, (81m:58031)**

70D99 None of the above, but in this section

Andrews, Gordon C. A general re-statement of the laws of dynamics based on graph theory. (*See* **80h:00004**)
Froese, R. G. *See* **Osborn, T. A.; et al., 81j:70003**
Howes, S. F. *See* **Osborn, T. A.; et al., 81j:70003**
Osborn, T. A. (*with* Froese, R. G.; Howes, S. F.) Levinson's theorems in classical scattering. **81j:70003**
Shen, C. N. Sensitivity coefficient of exterior ballistics with velocity square damping. (*See* **80m:73002**)

secondary classifications:

Beran, M. J. Potential interaction using a metric space. (Italian and Russian summaries) **(81k:81072)**

70Exx Dynamics of rigid bodies

70E05 Motion of the gyroscope

Ančev, Atanas (*with* Rumjancev, V. V.) On the dynamics and stability of gyrostats. (Russian. English summary) **81e:70004**
Biljunia, G. D. (*with* Zavozin, Ž. G.) One property of mechanical systems in which the position of the center of mass is adjustable. **81f:70003**
Dedeoğlu, S. M. Evaluation of the turning points of gyroscopic oscillations. (Turkish summary) **81e:70005**
Denisov, G. G. (*with* Komarov, V. N.) Nonconservative moments and their effect on precession of a noncontact gyroscope. **81f:70004**
Harlamov, M. P. An exact solution of the problem of gyroscope motion in Cardano's suspension. (Russian) **81m:70009**
Il'čaninov, V. P. (*with* Terelin, V. G.) Integration of the equations of motion of a one-axis gyroscope on a rotating base. **81g:70002**
Komarov, V. N. *See* **Denisov, G. G., 81f:70004**
Krementulo, V. V. The active stabilization of a rotating motion of a solid body that carries a mass point. (Russian) **81m:70010**
Nabjullin, M. K. Stability of relative equilibriums of a satellite-gyrostat in axially symmetric fields. (Russian) **81j:70004**
Pogosjan, T. I. (*with* Savčenko, O. Ja.) Motion of a Lagrange gyroscope in a force field that is variable with respect to direction. (Russian) **81e:70006**
Porat, I. Axisymmetrical auxiliary mass nutation-damper. **81m:70011**
Pucci, Edvige A class of ∞^2 nonregular precessions of the gyrostat subject to a Newtonian influence. (Italian. English summary) **81j:70005**
Rumjancev, V. V. *See* **Ančev, Atanas, 81e:70004**
Savčenko, O. Ja. *See* **Pogosjan, T. I., 81e:70006**
Sobolev, V. A. *See* **Strygin, V. V., 81g:70003**
Strygin, V. V. (*with* Sobolev, V. A.) The method of integral manifolds in the problem of the acceptability of the solution of precessional equations of gyroscopic systems. (Russian) **81g:70003**
Terelin, V. G. *See* **Il'čaninov, V. P., 81g:70002**
Zajačkovskii, V. S. Behavior of frequencies of connected gyroscopic systems. (Russian) **81c:70005**
Zavozin, Ž. G. *See* **Biljunin, G. D., 81f:70003**

secondary classifications:

Balli, Raffaele (*with* Nucci, Maria Clara) The rotations of a gyrostatic satellite in a circular orbit. (Italian. English summary) **(81g:70030)**
Cel'man, F. H. Resonances in some problems of classical mechanics. (Russian) **(81f:70013)**
Crocker, Earle B. *See* **Spencer, Richard V., (81e:93019)**
Meirovitch, L. *See* **Öz, H., (81d:70023)**
Nucci, Maria Clara *See* **Balli, Raffaele, (81g:70030)**
Öz, H. (*with* Meirovitch, L.) Optimal modal-space control of flexible gyroscopic systems. **(81d:70023)**
Smirnov, E. Ja. Control of the triaxial orientation of a solid body. (Russian) **(81g:93076)**
Spencer, Richard V. (*with* Crocker, Earle B.) Observability considerations for an inertial gyrocompass. **(81e:93019)**

70E10 Motion of projectiles and rockets

70E15 Motion of a general rigid body

Cid Palacios, Rafael (*with* Correas Dobato, José M.) The canonical forms of the motion of a rigid body around its center of mass. (Spanish. English summary) **81m:70012**
Correas Dobato, José M. *See* **Cid Palacios, Rafael, 81m:70012**
Demin, V. G. *See* **Vagner, È. A.; et al., 81g:70005**
González Gascón, F. (*with* Rodríguez-Camino, E.) On the axoids of a moving rigid body. **81h:70001**
Harlamov, M. P. Stationary solutions of a problem of two rigid bodies. (Russian) **81g:70004**
(*with* Kononyhin, G. A.) Inertial motion of a system of two solids connected by a spherical hinge. (Russian) **81f:70005**
Harlamov, P. V. New methods in the dynamics of systems of rigid bodies. **81k:70005**
Il'inskiĭ, A. Ju. (*with* Storoženko, V. O.; Temčenko, M. E.) Motion of an axisymmetric solid suspended on a string. **81f:70007**
Konkina, L. I. *See* **Vagner, È. A.; et al., 81g:70005**
Kononyhin, G. A. (*with* Pozdnjakovič, E. V.) A study of the stability of inertial motion of two axially symmetric bodies. (Russian) **81f:70006**
See also **Harlamov, M. P., 81f:70005**
Lacomba Zamora, Ernesto A. Invariant sets and polhodes in the rigid body problem. **81a:70003**
Marinbah, M. A. Ljapunov periodic motions of a heavy rigid body with a fixed point. (Russian. English summary) **81b:70003**
Markov, Ju. G. Application of Poincaré periodic solutions to the study of the Moon's rotational motion. **81m:70013**

Poničjakovič, E. V. *See* **Konoplyha, G. A., 81f:70006**
Rodríguez-Canino, E. *See* **González Gascón, F., 81h:70001**
Sergeev, V. S. A family of periodic solutions of equations of motion of a solid body with a fixed point. (Russian) **81e:70007**
Storoženko, V. O. *See* **Ilinskiĭ, A. Ju.; et al., 81f:70007**
Temčenko, M. E. *See* **Ilinskiĭ, A. Ju.; et al., 81f:70007**
Torrisi, Mariano (*with* Valenti, Antonino) On a class of semiregular generalized precessions of a heavy rigid body. (Italian. English summary) **81c:70006**
Totaro, Carmelo Questions on the dynamics of the rigid body. (Italian) **81d:70005**
Vagner, È. A. (*with* Demin, V. G.; Konkina, L. I.) Averaging methods in solid body dynamics. (Russian) **81g:70005**
Valenti, Antonino *See* **Torrisi, Mariano, 81c:70006**

secondary classifications:

Černous'ko, F. L. Optimal control of oscillations. (Russian) **(81g:93051)**
Linkens, D. A. Marine systems. (*See* **81m:93005**)
Rațiu, Tudor The motion of the free n-dimensional rigid body. **(81h:58032)**
Roels, J. On an example of impossibility to build a canonical transformation when the eigenvalues are zero. **(81e:70016)**
Šidlichovský, M. The inclination changes in the problem of two triaxial rigid spheroids. **(81m:70023)**
Totaro, Carmelo On particular movements of an artificial satellite. (Italian. English summary) **(81g:70032)**
Vielsack, Peter The analogy between elastic rods and rigid body motions. II. Linear theory. **(81h:73030)**

70E20 Perturbation methods for Euler's equations

70E25 Poinsot method

70E99 None of the above, but in this section

Blewett, P. Simple geometrical construction for finding the eigenvector of a general rotation. **81e:70008**
Burlakova, L. A. The simplest motions of a coupling of two bodies in orbit. (Russian) **81g:70006**
Galullin, I. A. Inverse problem in the dynamics of a rigid body with one attached point. **81g:70007**
Harlamova, E. I. (*with* Lesina, M. E.) Equations of motion of two connected bodies. (Russian) **81e:70009**
Ilinskiĭ, A. Ju. (*with* Malašenko, S. V.; Storoženko, V. O.; Temčenko, M. E.; Šiškin, P. G.) Method of balancing rotating bodies on a string drive. **81d:70006**
Kalybaev, A. A. Classification of a group of variables describing the translational-orbital motion of a planetary system as a function of time. (Russian) **81g:70008**
Lesina, M. E. *See* **Harlamova, E. I., 81e:70009**
Lötstedt, Per Singular perturbation and mechanical systems of rigid bodies. (*See* **81j:76001**)
Malašenko, S. V. *See* **Ilinskiĭ, A. Ju.; et al., 81d:70006**
Rudnicki, Marek Affinely-rigid body in two dimensions. **81b:70004**
Rumjancev, V. V. On the influence of gyroscopic and dissipative forces on the stability of steady-state motion. **81e:70010**
Šiškin, P. G. *See* **Ilinskiĭ, A. Ju.; et al., 81d:70006**
Slawianowski, Jan J. Deformable gyroscope in a non-Euclidean space classical, nonrelativistic theory. **81k:70006**
Storoženko, V. O. *See* **Ilinskiĭ, A. Ju.; et al., 81d:70006**
Tarasova, L. Z. Stability of the rotation of a heavy solid body of variable mass, having a cavity filled with a fluid, subject to reactive forces in a case of Lagrange type. (Russian) **81h:70002**
Temčenko, M. E. *See* **Ilinskiĭ, A. Ju.; et al., 81d:70006**

secondary classifications:

Belova, T. M. On the set of stabilizing in the large controls of a solid body with one fixed point. (Russian) **(81i:93026)**
Beneš, Jiří Polyhedral diagrams of angular velocity distributions in the control of dodecahedral bodies. (Russian summary) **(81a:93075)**
Burlakova, L. A. (*with* Irtegov, V. D.; Počtarenko, M. V.) Application of a computer for deriving and studying differential equations of motion of mechanical systems in a symbolic form. (Russian) **(81e:70019)**
(Četaev, N. G.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
Frischbier, Reinhard Zur Theorie des Körperstoßes. **(81k:70004)**
Hacısalihoğlu, H. Hilmi Umbrella motions. (Turkish summary) **(81f:51017)**
Irtegov, V. D. *See* **Burlakova, L. A.; et al., (81e:70019)**
Kane, Thomas R. (*with* Levinson, David A.) Large motions of unrestrained space trusses. **(81e:70032)**
Karpov, A. I. (*with* Strežnev, V. A.) Construction of dynamical models and identification in problems of investigating the dynamics of complex systems. (Russian) **(81e:93027)**
Koval'ov, O. M. Observation problems in solid body dynamics. (Russian) **(81g:93017)**
Lacomba Zamora, Ernesto A. Transitive mechanical systems. **(81b:58030)**
Levinson, David A. *See* **Kane, Thomas R., (81e:70032)**
(Matrosov, V. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
(Pančenkov, A. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
Počtarenko, M. V. *See* **Burlakova, L. A.; et al., (81e:70019)**
Savula, Ja. G. New orthogonal curvilinear coordinates. (Ukrainian. Russian summary) **(81m:53011)**
Strežnev, V. A. *See* **Karpov, A. I., (81e:93027)**
All-Union Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Analytical mechanics ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Anniversary:
Birth of N. G. Četaev ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Irkutsk ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Problems of stability of motion, analytical mechanics and control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Stability of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**

70Fxx Dynamics of a system of particles, including celestial mechanics

70F05 Two-body problem

Koenov, D. Z. Differential equations of perturbed translational-rotational motion of a system of two bodies in Delaunay-Andoyer elements. (Russian. Tajiki summary) **81m:70014**
Magnaradze, N. G. On the motion of two bodies of variable masses in a Newtonian gravitational field. (Russian. Georgian and English summaries) **81i:70001**

secondary classifications:

Černikov, N. A. (*with* Šavohina, N. S.) Example of the relativistic two-body problem. I. The boundary value problem for a minimal surface. (Russian. English summary) **(81j:83007a)**
(*with* Šavohina, N. S.) Example of the relativistic two-body problem. II. Equations of motion. (Russian. English summary) **(81j:83007b)**
Froese, R. G. *See* **Osborn, T. A.; et al., (81j:70003)**
Howes, S. F. *See* **Osborn, T. A.; et al., (81j:70003)**
Iosifescu, Mircea (*with* Scutaru, Horia) On six-dimensional canonical realizations of the so(4, 2) algebra. **(81m:81027)**
Osborn, T. A. (*with* Froese, R. G.; Howes, S. F.) Levinson's theorems in classical scattering. **(81j:70003)**
Pham Mau Quan Géométrie du problème de Kepler: courbure et géodésiques. (English summary) **(81j:58044)**
Géométrie du problème de Kepler: orbites et variétés des orbites. (English summary) **(81j:58045)**
Šavohina, N. S. *See* **Černikov, N. A., (81j:83007a)** *and* **Černikov, N. A., (81j:83007b)**
Scutaru, Horia *See* **Iosifescu, Mircea, (81m:81027)**

70F07 Three-body problem

Bhola, Ishwar Eigenvalues and first order normalisation in the generalised restricted problem of three bodies in two dimensions. **81g:70009**
Broucke, R. (*with* Walker, D. E.) Numerical explorations of the rectilinear problem of three bodies. **81a:70004**
Dubošin, G. N. The generalized restricted problem of three rigid bodies. (Russian. French summary) **81m:70015a**
The special generalized problem of three rigid bodies. (Russian. French summary) **81m:70015b**
Evteev, V. P. (*with* Nagorev, B. M.) Convergence of series representing a class of periodic solutions of averaging equations of an external variant of the restricted elliptic three-body problem. (Russian. Tajiki summary) **81g:70010**
Henrard, Jacques On Poincaré's second species solutions. **81a:70005**
Hulkower, Neal D. Central configurations and hyperbolic-elliptic motion in the three-body problem. **81a:70006**
Ichtiaroglou, S. The family I_{3_0} of the three-dimensional general three-body problem (parts I and II). **81e:70011**
(*with* Katopodis, K.; Michalodimitrakis, M.) Restricted problem: families of vertical critical periodic orbits. **81j:70006**
Ipatov, S. I. Mutual gravitational influence of two protoplanets in a planar three-body problem in initially circular orbits. (Russian. English summary) **81f:70008**
Irigoyen, Jeanne Maÿlis La variété de collision triple, dans le cas isocèle du problème plan des trois corps. (English summary) **81g:70011**
Katopodis, K. *See* **Ichtiaroglou, S.; et al., 81j:70006**
Kinoshita, Hiroshi Note on the triangular Lagrangian points in the elliptic restricted problem of three bodies. **81a:70007**

Lacomba Zamora, Ernesto A. (*with* Losco, Lucette) Triple collisions in the isosceles 3-body problem. **81h:70003**

Langlois, M. Sur une réduction des équations du mouvement du problème des 3 corps. (English summary) **81a:70008**

Llibre, Jaume (*with* Simó, Carlos) Oscillatory solutions in the planar restricted three-body problem. **81f:70009**

Losco, Lucette *See* **Marchal, C., 81d:70007** *and* **Lacomba Zamora, Ernesto A., 81h:70003**

Marchal, C. (*with* Losco, Lucette) Analysis of neighbourhood of triple collisions and of triparabolic escapes in the 3 body-problem. **81d:70007**

Markellos, Vassilis Periodic orbits with and without symmetry in the three-dimensional general three-body problem. **81a:70009**

Message, P. J. On the existence of periodic solutions of Poincaré's second sort in the general problem of three bodies moving in plane. **81j:70007**

Michalodimitrakis, M. The families C1V and M2V of the three-dimensional general three-body problem. **81m:70017**

See also **Ichtiaroglou, S.; et al., 81j:70006**

Nagorev, B. M. *See* **Evteev, V. P., 81g:70010**

Futetta, Nicolás Restrictions to the motion of three bodies along a planar solution. **81m:70018**

Puel, François Numerical study of the rectilinear isosceles restricted problem. **81k:70007**

Robin, I. A. Bifurcations of plane with three-dimensional periodic orbits in the elliptic restricted problem. **81m:70016**

Simó, Carlos Masses for which triple collision is regularizable. **81a:70010**

See also **Llibre, Jaume, 81f:70009**

Troickaja, L. S. Equations of the motion of three solid bodies in Ljapunov's variables and Euler's angles. (Russian. English summary) **81d:70008**

Valkov'jak, M. A. Qualitative characteristics of the evolution of orbits in the restricted, circular doubly averaged three-body problem. (Russian. English summary) **81f:70010**

Vereš, F. A qualitative analysis of the plane, averaged, restricted, three-body problem. **81i:70002**

Walker, D. E. *See* **Broucke, R., 81a:70004**

Zikides, M. K. New *u*-type families of periodic orbits in the restricted three-body problem. **81g:70012**

secondary classifications:

Abraham, Ralph (*with* Marsden, Jerrold E.) ★Foundations of mechanics. **(81e:58025)**

Andreev, A. S. (*with* Šančenko, N. I.; Šul'gin, A. M.) Application of the averaging method and the method of Ljapunov functions in the investigation of the motion of some mechanical systems. (Russian) **(81h:93071)**

Broucke, R. Traveling between the Lagrange points and the Moon. **(81b:70016)**

(Cushman, Richard) *See* **Abraham, Ralph; et al., (81e:58025)**

Dosybekov, K. Relativistic effects in the dynamics of spacecraft. (Russian) **(81i:83017)**

Marsden, Jerrold E. *See* **Abraham, Ralph, (81e:58025)**

Neu, John C. The method of near-identity transformations and its applications. **(81m:70031)**

(Ratiu, Tudor) *See* **Abraham, Ralph; et al., (81e:58025)**

Šančenko, N. I. *See* **Andreev, A. S.; et al., (81h:93071)**

Schmidt, Dieter S. Literal solution for Hill's lunar problem. **(81f:70012)**

Šul'gin, A. M. *See* **Andreev, A. S.; et al., (81h:93071)**

70F10 *n*-body problem

Aarseth, S. J. An N-body integration method in co-moving coordinates. **81a:70011**

Bryant, John Sur une réduction du problème des N-corps mettant en évidence une structure de contact. (English summary) **81d:70009**

Calogero, F. Solvable many-body problems and related mathematical findings (and conjectures). **81m:70019**

Devaney, Robert L. Structural stability of homothetic solutions of the collinear n-body problem. **81j:70008**

Hadjidemetriou, John D. The restricted planetary 4-body problem. **81a:70012**

Instabilities in periodic planetary-type orbits. **81g:70013**

Luk'janov, L. G. A form of the equations of the many-body problem. (Russian) **81a:70013**

Maslov, V. P. (*with* Mosolov, P. P.) Asymptotic behavior as $N \to \infty$ of trajectories of N point masses, interacting according to Newton's gravitation law. (Russian) **81b:70005**

McGehee, Richard Singularities in classical celestial mechanics. **81b:70006**

Mosolov, P. P. *See* **Maslov, V. P., 81b:70005**

Palmore, Julian I. Central configurations and relative equilibria in the n-body problem in E^4. **81a:70014**

Roy, Archie E. Empirical stability criteria in the many-body problem. **81a:70015**

Saari, Donald G. On the role and the properties of n-body central configurations. **81a:70016**

Širmin, G. Partial solutions of a problem obtained from the Huang model with the aid of the Fatou averaging procedure. (Russian) **81m:70020**

Whittaker, J. M. Dynamics with variable masses. **81k:70008**

Zadunaisky, P. E. On the accuracy in the numerical solution of the N-body problem. **81k:70009**

secondary classifications:

Barducci, A. (*with* Casalbuoni, R.; Lusanna, L.) Energy-momentum tensor of extended relativistic systems. (Italian and Russian summaries) **(81a:83023)**

Bryant, John La variété de collision triple comme variété invariante d'un système de contact. (English summary) **(81k:58033)**

Casalbuoni, R. *See* **Barducci, A.; et al., (81a:83023)**

Lusanna, L. *See* **Barducci, A.; et al., (81a:83023)**

70F15 Celestial mechanics

Abalakin, V. K. *See* **Davies, M. E.; et al., 81j:70009**

Barkin, Ju. V. Poincaré periodic solutions of the third kind in the problem of the translational-rotational motion of a rigid body in the gravitational field of a sphere. **81g:70014**

Baumgarte, J. The general theory of conservative stabilization of the Keplerian problem. **81b:70007**

Beleckiĭ, V. V. (*with* Levin, E. M.; Pogorelov, D. Ju.) On the problem of the resonance rotation of Venus. **81h:70004**

Bhatnagar, K. B. (*with* Hallan, P. P.) Effect of perturbed potentials on the stability of libration points in the restricted problem. **81d:70010**

Bragar', L. F. Numerical experiments in the study of the translational-rotational motion of small planets. (Russian) **81f:70011**

Calvo Pinilla, Manuel The problem of ideal resonance. (Spanish) **81m:70021**

Cross, C. A. *See* **Davies, M. E.; et al., 81j:70009**

Davies, M. E. (*with* Abalakin, V. K.; Cross, C. A.; Duncombe, R. L.; Masursky, H.; Morando, B.; Owen, T. C.; Seidelmann, P. K.; Sinclair, A. T.; Wilkins, G. A.; Tjuflin, Y. S.) Report of the IAU Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites. **81j:70009**

Duncombe, R. L. *See* **Davies, M. E.; et al., 81j:70009**

Elʹyashkaja, N. A. (*with* Hentov, A. A.) Realizability of synchronism 2:1 of natural celestial bodies. (Russian) **81h:70005**

Garfinkel, Boris The regularizing function in resonance problems. **81d:70011**

Hallan, P. P. *See* **Bhatnagar, K. B., 81d:70010**

Hentov, A. A. *See* **Elʹyashkaja, N. A., 81h:70005**

Ishwar, Bhola Librations around the collinear points with variable primary masses. **81k:70010**

Levin, E. M. *See* **Beleckiĭ, V. V.; et al., 81h:70004**

Martins, Roberto Vieira Sur la classification des orbites périodiques instables d'après Poincaré. (English summary) **81e:70012**

Masursky, H. *See* **Davies, M. E.; et al., 81j:70009**

Michalodimitrakis, M. Hill's problem: families of three-dimensional periodic orbits. I. **81c:70007**

Morando, B. *See* **Davies, M. E.; et al., 81j:70009**

(Oldham, Edward U.) *See* **Barkin, Ju. V., 81g:70014**

Owen, T. C. *See* **Davies, M. E.; et al., 81j:70009**

Pavlov, G. G. Differential equations for perturbed motion relative to the osculating variables of the KS transformation. **81m:70022**

Pogorelov, D. Ju. *See* **Beleckiĭ, V. V.; et al., 81h:70004**

Richardson, David L. A note on a Lagrangian formulation for motion about the collinear points. **81j:70010**

Analytic construction of periodic orbits about the collinear points. **81j:70011**

Roy, Archie E. ★Orbital motion. **81j:70012**

Schmidt, Dieter S. Literal solution for Hill's lunar problem. **81f:70012**

Seidelmann, P. K. *See* **Davies, M. E.; et al., 81j:70009**

Šidlichovský, M. The inclination changes in the problem of two triaxial rigid spheroids. **81m:70023**

Sinclair, A. T. *See* **Davies, M. E.; et al., 81j:70009**

Standaert, D. Direct perturbations of the planets on the Moon's motion. **81m:70024**

Tjuflin, Y. S. *See* **Davies, M. E.; et al., 81j:70009**

Wilkins, G. A. *See* **Davies, M. E.; et al., 81j:70009**

secondary classifications:

Bhola, Ishwar Eigenvalues and first order normalisation in the generalised restricted problem of three bodies in two dimensions. **(81g:70009)**

Braess, Dietrich Über die numerische Behandlung von Problemen mit kleinen Nennern. (English summary) **(81g:65095)**

Broucke, R. Notes on the central force r^n. **(81k:70003)**

Cid Palacios, Rafael (*with* Correas Dobato, José M.) The canonical forms of the motion of a rigid body around its center of mass. (Spanish. English summary) **(81m:70012)**

Correas Dobato, José M. *See* **Cid Palacios, Rafael, (81m:70012)**

Dosybekov, K. Relativistic effects in the dynamics of spacecraft. (Russian) **(81i:83017)**

Hadjidemetriou, John D. Instabilities in periodic planetary-type orbits. **(81g:70013)**

Lebedev, P. A. (*with* Matveev, P. N.; Morozov, A. V.) Equation of motion of a train as a viscoelastic one-dimensional medium and its solution. (Russian) **(81i:73005)**

Losco, Lucette Les systèmes Lagrangiens dégénérés. (English summary) **(81a:70022)**

Markov, Ju. G. Application of Poincaré periodic solutions to the study of the Moon's rotational motion. **(81m:70013)**

Matveev, P. N. *See* **Lebedev, P. A.; et al., (81i:73005)**

Message, P. J. On the existence of periodic solutions of Poincaré's second sort in the general problem of three bodies moving in plane. **(81j:70007)**

Michaelidis, P. Orbits near a 2/3 resonance. **(81m:85003)**

Morozov, A. V. *See* **Lebedev, P. A.; et al., (81i:73005)**

Petrovskaja, M. S. The expansion of a perturbing function in Jacobi polynomials. (Russian. English summary) **(81b:33019)**

Simó, Carlos Invariant curves near parabolic points and regions of stability. **(81m:58035)**

Širmin, G. Partial solutions of a problem obtained from the Huang model with the aid of the Fatou averaging procedure. (Russian) **(81m:70020)**

Tong, Fu (*with* Wu, Lian Da; Wang, Chang Bin) Recurrence relations of the inclination function. **(81b:70017)**

Verhulst, Ferdinand Periodic solutions of continuous self-gravitating systems. **(81k:85004)**

Wang, Chang Bin *See* **Tong, Fu; et al., (81b:70017)**

Wu, Lian Da *See* **Tong, Fu; et al., (81b:70017)**

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★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. **(81a:70001b)**

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Mathematical Methods in Celestial Mechanics ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. **(81a:70001a)**
★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. **(81a:70001b)**
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Conference on Mathematical Methods in Celestial Mechanics ★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part I. **(81a:70001a)**
★Proceedings of the Sixth Conference on Mathematical Methods in Celestial Mechanics. Part II. **(81a:70001b)**

70F20 Holonomic systems

Ferrarese, Giorgio Riemannian dynamics in a holonomic system with internal structure. I. (Italian. English summary) **81d:70012a**
Riemannian dynamics in a holonomic system with internal structure. II. (Italian. English summary) **81d:70012b**

secondary classifications:

Do Sanh Stability of stationary motion of mechanical systems. (Polish and Russian summaries) **(81c:70013)**
Vujanović, B. On a gradient method in nonconservative mechanics. (German summary) **(81b:70013)**

70F25 Nonholonomic systems

Čović, V. On a differential principle of higher order for nonholonomic mechanical systems. (French and Serbo-Croatian summaries) **81e:70013**
Fufaev, N. A. *See* **Musarskiĭ, R. A., 81g:70015**
Karapetjan, A. V. Some problems of stability of motion of nonholonomic systems. (Russian) **81i:70003**
Marsicano, F. R. Sur les systèmes non holonômes. **81c:70008**
Musarskiĭ, R. A. (*with* Fufaev, N. A.) Behavior of a nonholonomic system under external actions. **81g:70015**

secondary classifications:

Baumgarte, J. Einbau nichtholonomer Nebenbedingungen in die Dissipationsfunktion. **(81i:70007)**
Dominici, D. (*with* Gomis, J.) Poincaré-Cartan integral invariant and canonical transformations for singular Lagrangians. **(81k:70013)**
Georgiev, Georgi Iv. (*with* Ignat, Margareta) On the flow and current lines of some significant motions in continuum kinematics. (Italian) **(81m:53010)**
Gomis, J. *See* **Dominici, D., (81k:70013)**
Haitin, A. *See* **Silde, O., (81b:70008)**
Ignat, Margareta *See* **Georgiev, Georgi Iv., (81m:53010)**
Lapkovskiĭ, A. K. Nonholonomic comoving reference frames with forced rotation. (Russian. English summary) **(81d:53007)**
Nikolenko, I. V. Stability of the transient motion of a class of nonholonomic systems. (Ukrainian. English and Russian summaries) **(81f:70021)**
Rel'vik, H. On equations of Hamiltonian type. (Russian. Estonian and English summaries) **(81f:70014)**
Silde, O. (*with* Haitin, A.) The motion of mechanical systems with account taken of coupling equations of a general type. (Russian. Estonian and German summaries) **(81b:70008)**

70F30 Impulsive motion

70F35 Collisions

Eschbach, D. Étude de la collision triple. (English summary) **81f:70013**
Komarov, I. V. (*with* Ščerbakov, A. P.) Classical scattering by an anisotropic potential. (Russian. English summary) **81a:70017**
Ščerbakov, A. P. *See* **Komarov, I. V., 81a:70017**
Waldvogel, Jörg Stable and unstable manifolds in planar triple collision. **81c:70009**

secondary classifications:

Vaseritein, L. N. On systems of particles with finite-range and/or repulsive interactions. **(81b:58028)**

70F99 None of the above, but in this section

Cattaneo, Carlo Minimum theorems for the dynamics of constrained systems. (Italian. English summary) **81j:70013**
Cebeci, Tuncer *See* **Reynolds, W. C., (*See* 80d:76044)**
Eliezer, C. J. The symmetries and first integrals of some differential equations of dynamics. **81d:70013**
Golst, G. (*with* Silde, O.) Differential principles of mechanics derived from the equation of virtual power. (Russian. Estonian and German summaries) **81m:70025**
Haitin, A. *See* **Silde, O., 81b:70008**
Reynolds, W. C. (*with* Cebeci, Tuncer) Calculation of turbulent flows. (*See* **80d:76044**)
Silde, O. (*with* Haitin, A.) The motion of mechanical systems with account taken of coupling equations of a general type. (Russian. Estonian and German summaries) **81b:70008**
See also **Golst, G., 81m:70025**

secondary classifications:

Arnéodo, A. *See* **Tresser, C.; et al., (81j:58058b)**
Coullet, P. *See* **Tresser, C.; et al., (81j:58058b)**
Greenspan, Donald Arithmetic modeling in applied mathematics. **(81m:65014)**
Nishino, Yoshio On differential operators associated with quadratic first integrals of simple dynamical systems. **(81g:58015)**
Rohrlich, F. Relativistic Hamiltonian dynamics. **(81k:70014)**
Simó, Carlos On the Hénon-Pomeau attractor. **(81j:58058a)**
Tresser, C. (*with* Coullet, P.; Arnéodo, A.) Topological horseshoe and numerically observed chaotic behaviour in the Hénon mapping. **(81j:58058b)**

70Gxx General representations of dynamical systems [See also 58F05.]

70G05 Riemannian geometry, tensorial methods [See also 53A45, 53A50, 53B20.]

secondary classifications:

Kimura, Morishige On the second maximum number of all linearly independent quadratic first integrals of the geodesic equations in Riemannian spaces. **(81f:53017)**
Kozlov, V. V. Topological obstacles to the integrability of natural mechanical systems. (Russian) **(81c:58036)**
van Moerbeke, Pierre About isospectral deformations of discrete Laplacians. **(81g:58018)**

70G10 Generalized coordinates

secondary classifications:

Casati, Giulio (*with* Čirikov, B. V.; Ford, Joseph) Marginal local instability of quasiperiodic motion. **(81k:70012)**
Čirikov, B. V. *See* **Casati, Giulio; et al., (81k:70012)**
Ford, Joseph *See* **Casati, Giulio; et al., (81k:70012)**

70G15 Space of events

70G20 Impulse-energy space

70G25 Configuration space

70G30 State space

70G35 Phase space

Pedroza, A. C. (*with* Vianna, J. D. M.) On the Jordan algebra and the symmetric formulation of classical mechanics. **81b:70009**
Vianna, J. D. M. *See* **Pedroza, A. C., 81b:70009**

secondary classifications:

Cohn, Jack Operator formulation of classical mechanics. **(81j:70015)**

70G99 None of the above, but in this section

Manglarotti, Luigi Mechanics on a Galilean manifold. **81k:70011**
Mielnik, Bogdan Mobility of nonlinear systems. **81a:70018**
Sternberg, Shlomo (*with* Ungar, Thomas) Classical and prequantized mechanics without Lagrangians or Hamiltonians. **81e:70014**
Ungar, Thomas *See* **Sternberg, Shlomo, 81e:70014**

secondary classifications:

Easton, Robert W. Perturbed twist maps, homoclinic points and ergodic zones. **(81c:58052)**
Estabrook, Frank B. Differential geometry as a tool for applied mathematicians. **(81m:58009)**
Gotay, Mark J. (*with* Nester, James M.) Generalized constraint algorithm and special presymplectic manifolds. **(81i:58024)**
Lacomba Zamora, Ernesto A. Transitive mechanical systems. **(81b:58030)**
Nester, James M. *See* **Gotay, Mark J., (81i:58024)**
Newhouse, Sheldon E. Lectures on dynamical systems. **(81m:58028)**
Ruelle, David Recent results on differentiable dynamical systems. **(81j:58053)**
Schumacher, Konrad Dynamical systems with memory on history spaces with monotonic seminorms. **(81g:34091)**
Slawianowski, Jan J. Deformable gyroscope in a non-Euclidean space classical, nonrelativistic theory. **(81k:70006)**

70Hxx Hamiltonian and Lagrangian mechanics [See also 58F05.]

70H05 Hamilton's equations

Casati, Giulio (*with* Čirikov, B. V.; Ford, Joseph) Marginal local instability of quasiperiodic motion. **81k:70012**
Čirikov, B. V. *See* **Casati, Giulio; et al., 81k:70012**

Ford, Joseph *See* **Casati, Giulio; et al., 81k:70012**
Giachetti, R. (*with* Sorace, E.) Relativistic two-body interactions: a Hamiltonian formulation. **81d:70014**
Keis, I. The dynamics of Lagrange systems with an aggregating invariant that is linear with respect to the Hamiltonian and the impulses. (Russian. Estonian and English summaries) **81i:70004**
Kobussen, J. A. Note on the virial theorem. **81i:70005**
LaBudde, Robert A. Discrete Hamiltonian mechanics. **81a:70019**
Rel'vik, H. On equations of Hamiltonian type. (Russian. Estonian and English summaries) **81f:70014**
Rüssmann, Helmut Remark on integrable Hamiltonian systems. **81a:70020**
Sorace, E. *See* **Giachetti, R., 81d:70014**
Szebehely, Victor Long-time predictions in nonlinear dynamics. **81h:70006**

secondary classifications:

Bruno, A. D. Noncanonical invariants of Hamiltonian systems. (Russian. English summary) **(81a:58024)**
Khéli, Idriss Remarques sur l'algèbre de Lie des fonctions sur $\mathbf{R}^{2n}$ muni du crochet de Poisson. (English summary) **(81f:58020)**
Kolesnikov, N. N. *See* **Kozlov, V. V., (81c:58037)**
Kozlov, V. V. (*with* Kolesnikov, N. N.) Integrability of Hamiltonian systems. (Russian. English summary) **(81c:58037)**
Pereiomov, A. M. The simple relation between certain dynamical systems. **(81m:34059)**
Rabinowitz, Paul H. Periodic solutions of a Hamiltonian system on a prescribed energy surface. **(81a:58030a)**
Weinstein, Alan On the hypotheses of Rabinowitz' periodic orbit theorems. **(81a:58030b)**

70H10 Liouville's theorem

70H15 Canonical transformations

Chattarji, D. *See* **Maharatna, A.; et al., 81a:70021**
Dominici, D. (*with* Gomis, J.; Longhi, G.) A possible approach to the two-body relativistic problem. (Italian and Russian summaries) **81g:70016**
Dragt, Alex J. (*with* Finn, John M.) Normal form for mirror machine Hamiltonians. **81g:70017**
Dutt, Ranabir (*with* Moharatna, A.) Comments on time-dependent canonical transformations as applied to certain nonlinear dissipative classical systems. **81b:70010**
See also **Maharatna, A.; et al., 81a:70021**
Finn, John M. *See* **Dragt, Alex J., 81g:70017**
Fuščič, V. I. (*with* Segeda, Ju. N.; Redčenko, G. A.) Invariant systems of equations in generalized mechanics. (Russian) **81i:70006**
Gomis, J. *See* **Dominici, D.; et al., 81g:70016**
Kirpičnikov, S. N. Generating functions of canonical transformations. (Russian. English summary) **81e:70015**
Leach, P. G. L. The complete symmetry group of the one-dimensional time-dependent harmonic oscillator. **81c:70010**
Quadratic Hamiltonians: the four classes of quadratic invariants, their interrelations and symmetries. **81j:70014**
Longhi, G. *See* **Dominici, D.; et al., 81g:70016**
Maharatna, A. (*with* Dutt, Ranabir; Chattarji, D.) Some applications of time-dependent canonical transformations to nonlinear nonconservative classical systems. **81a:70021**
Markeev, A. P. (*with* Sokol'skiĭ, A. G.) Method of studying periodic motions of Ljapunov and Hamiltonian systems and its realization on computer. (Russian. English summary) **81b:70011**
Moharatna, A. *See* **Dutt, Ranabir, 81b:70010**
Redčenko, G. A. *See* **Fuščič, V. I.; et al., 81i:70006**
Roels, J. On an example of impossibility to build a canonical transformation when the eigenvalues are zero. **81e:70016**
Segeda, Ju. N. *See* **Fuščič, V. I.; et al., 81i:70006**
Sokol'skiĭ, A. G. *See* **Markeev, A. P., 81b:70011**

secondary classifications:

Andreassi, Gabriele On the generalized groups of functions with a singular matrix. (Italian. English summary) **(81k:58032)**
Battezzati, M. The method of canonical transformations applied to the motion of a charge coupled to the electromagnetic field in the nonrelativistic approximation. (French summary) **(81k:78006)**
Daubechies, Ingrid Coherent states and projective representation of the linear canonical transformations. **(81f:81023)**
Dorfman, I. Ja. *See* **Gel'fand, I. M., (81c:58035)**
Françoise, Jean-Pierre Points périodiques de transformations canoniques. (English summary) **(81e:58046)**
Gel'fand, I. M. (*with* Dorfman, I. Ja.) Hamiltonian operators and algebraic structures associated with them. (Russian) **(81c:58035)**
Gull Guerrero, F. (*with* Martínez Alonso, L.) The Jaulent-Miodek transformation is canonical. **(81h:35044)**
Kinoshita, Hiroshi Note on the triangular Lagrangian points in the elliptic restricted problem of three bodies. **(81a:70007)**
Korolev, V. S. *See* **Kovalenko, A. N., (81f:49037)**
Kovalenko, A. N. (*with* Korolev, V. S.) On the foundation of a stepwise optimization scheme. (Russian) **(81f:49037)**
Martínez Alonso, L. *See* **Gull Guerrero, F., (81h:35044)**

70H20 Hamilton-Jacobi equations

Cohn, Jack Operator formulation of classical mechanics. **81j:70015**
Fokas, A. S. (*with* Lagerstrom, P. A.) Quadratic and cubic invariants in classical mechanics. **81f:70015**
Katzin, Gerald H. (*with* Levine, Jack) Symmetries of the Hamilton-Jacobi equation and concomitant constants of motion. **81g:70018**
Lagerstrom, P. A. *See* **Fokas, A. S., 81f:70015**
Levine, Jack *See* **Katzin, Gerald H., 81g:70018**
Sumbatov, A. S. Integrals that are linear with respect to velocity. Generalization of Jacobi's theorem. (Russian) **81j:70016**

secondary classifications:

Bleuler, K. Differential geometrical methods in physical problems. **(81e:58050)**
Edelen, Dominic G. B. ★Isovector methods for equations of balance. **(81k:58001)**
Fokas, A. S. Group-theoretical aspects of constants of motion and separable solutions in classical mechanics. **(81c:58006)**
Kalnins, E. G. (*with* Miller, Willard, Jr.) Killing tensors and variable separation for Hamilton-Jacobi and Helmholtz equations. **(81m:53026)**
Miller, Willard, Jr. *See* **Kalnins, E. G., (81m:53026)**
Mukunda, N. Phase space methods and the Hamilton-Jacobi form of dynamics. **(81f:58021)**
Saltanov, M. V. The analytic mechanics of elastic fibers in the Euler representation. (Russian) **(81g:73019)**
Šapovalov, V. N. Stäckel spaces. (Russian) **(81d:53016)**

70H25 Hamilton's principle

secondary classifications:

Goenner, Hubert F. On the equivalence of the Palatini and Hilbert methods of variation. **(81i:83011)**
Katzin, Gerald H. (*with* Levine, Jack) Charge conservation as a concomitant of conformal motions coupled to generalized gauge transformations. **(81f:83024)**
Levine, Jack *See* **Katzin, Gerald H., (81f:83024)**

70H30 Other variational principles

Clarke, Frank H. (*with* Ekeland, Ivar) Hamiltonian trajectories having prescribed minimal period. **81e:70017**
Ekeland, Ivar *See* **Clarke, Frank H., 81e:70017**
Ray, John R. Time-dependent invariants with applications in physics. **81f:70016**

secondary classifications:

Leipholz, H. H. E. On time-invariant functionals for certain mechanical systems subject to follower forces. **(81j:70019)**
Rosen, Joe Symmetry and conservation: inverse Noether's theorem and general formalism. **(81c:81022)**
Rumjancev, V. V. Some variational principles of mechanics. (Russian) **(81d:49030)**
Taliaferro, Steven D. An inversion of the Lagrange-Dirichlet stability theorem. **(81c:70012)**

70H35 Lagrange's equation of motion

Baumgarte, J. Einbau nichtholonomer Nebenbedingungen in die Dissipationsfunktion. **81i:70007**
Boyd, James N. (*with* Raychowdhury, P. N.) Projection operator techniques in Lagrangian mechanics: symmetrically coupled oscillators. **81e:70018**
Burlakova, L. A. (*with* Irtegov, V. D.; Počtarenko, M. V.) Application of a computer for deriving and studying differential equations of motion of mechanical systems in a symbolic form. (Russian) **81e:70019**
Chiroiu, Veturia *See* **Nicolae, V., 81d:70015**
González Gascón, F. Symmetries of the Lagrange equations and equivalent Lagrangians. **81i:70008**
Hollerbach, John M. A recursive Lagrangian formulation of manipulator dynamics and a comparative study of dynamics formulation complexity. **81m:70026**
Irtegov, V. D. *See* **Burlakova, L. A.; et al., 81e:70019**
Losco, Lucette Les systèmes Lagrangiens dégénérés. (English summary) **81a:70022**
Nicolae, V. (*with* Chiroiu, Veturia) On energy balance in the dynamics of systems with time-dependent constraints. **81d:70015**
Počtarenko, M. V. *See* **Burlakova, L. A.; et al., 81e:70019**
Ray, John R. (*with* Reid, James L.) Ermakov systems, Noether's theorem and the Sarlet-Bahar method. **81h:70007**
Raychowdhury, P. N. *See* **Boyd, James N., 81e:70018**
Reid, James L. *See* **Ray, John R., 81h:70007**
Sumbatov, A. S. Cyclic coordinates of conservative dynamical systems with two degrees of freedom. (Russian) **81c:70011**
Taliaferro, Steven D. An inversion of the Lagrange-Dirichlet stability theorem. **81c:70012**

secondary classifications:

Fuščič, V. I. (*with* Segeda, Ju. N.; Redčenko, G. A.) Invariant systems of equations in generalized mechanics. (Russian) **(81i:70006)**
Konopel'čenko, B. G. (*with* Mohnačev, V. G.) On the group-theoretical analysis of differential equations. **(81f:58045)**
Lutzky, M. Dynamical symmetries and conserved quantities. **(81c:58054)**
Mohnačev, V. G. *See* **Konopel'čenko, B. G., (81f:58045)**
Pogosjan, T. I. (*with* Savčenko, O. Ja.) Motion of a Lagrange gyroscope in a force field that is variable with respect to direction. (Russian) **(81c:70006)**

Ray, John R. *See* **Reid, James L., (81h:70018)**
Redčenko, G. A. *See* **Fuĭčič, V. I.; et al., (81i:70006)**
Reid, James L. (*with* Ray, John R.) Ermakov systems, nonlinear superposition, and solutions of nonlinear equations of motion. **(81h:70018)**
Richardson, David L. A note on a Lagrangian formulation for motion about the collinear points. **(81j:70010)**
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Segeda, Ju. N. *See* **Fuĭčič, V. I.; et al., (81i:70006)**

70H99 None of the above, but in this section

Bahar, L. Y. *See* **Sarlet, Willy, 81i:70010**
Baumgarte, J. Eine rein Hamiltonsche Formulierung der Mechanik von Systemen mit holonomen Bindungen. (English summary) **81d:70016**
Bellomo, Nicola (*with* Pistone, G.) Dynamical systems with a large number of degrees of freedom: a stochastic mathematical analysis for a class of deterministic problems. **81h:70008**
Bismut, Jean-Michel Diffusions hamiltoniennes, optimalité stochastique et équations de Hamilton-Jacobi. (English summary) **81m:70027**
Brunk, G. Lagrange-Funktion und Hamilton-Funktion bei nichtquadratischer kinetischer Energie. **81h:70009**
Camarena Badía, V. Canonical transformations in the optimization of trajectories. (Spanish. English summary) **81m:70028**
Dominici, D. (*with* Gomis, J.) Poincaré-Cartan integral invariant and canonical transformations for singular Lagrangians. **81k:70013**
Do Sanh Stability of stationary motion of mechanical systems. (Polish and Russian summaries) **81e:70013**
Gomis, J. *See* **Dominici, D., 81k:70013**
Kobussen, J. A. Lie-admissible structure of classical field theory. **81e:70020**
Komar, Arthur Constraint formalism of classical mechanics. **81b:70012**
Leach, P. G. L. A note on the Hénon-Heiles problem. **81h:70010**
See also **Prince, G. E., 81e:70021**
Lutzky, M. Noninvariance symmetries and constants of the motion. **81j:70017**
Mukunda, N. Time-dependent constraints in classical dynamics. **81c:70014**
Palacios Latasa, Manuel Systems of canonical variables in the case of hyperbolic motions. (Spanish) (*See* **81j:00009**)
Pistone, G. *See* **Bellomo, Nicola, 81h:70008**
Prince, G. E. (*with* Leach, P. G. L.) The Lie theory of extended groups in Hamiltonian mechanics. **81e:70021**
Ray, John R. Noether's theorem and exact invariants for time-dependent systems. **81h:70011**
Redčenko, G. A. (*with* Segeda, Ju. N.) The structure of invariant equations of motion in generalized Lagrange-Ostrogradskiĭ mechanics. (Russian. English summary) **81a:70023**
Rohrlich, F. Relativistic Hamiltonian dynamics. **81k:70014**
Ruijgrok, Th. W. (*with* van der Vlist, H.) On the Hamiltonian and Lagrangian formulation of classical dynamics for particles with spin. **81g:70019**
Sarlet, Willy (*with* Bahar, L. Y.) A direct construction of first integrals for certain nonlinear dynamical systems. (French and German summaries) **81i:70010**
Segeda, Ju. N. *See* **Redčenko, G. A., 81a:70023**
Sokol'skiĭ, A. G. The stability of Hamiltonian systems with first-order resonance. (Russian) **81g:70020**
Stey, G. C. A new approach to classical mechanics. **81h:70012**
Tartaglia, A. General Lagrangians for the motion of a point particle in a viscous medium and the problem of quantization. (Italian and Russian summaries) **81e:70022**
Vinoos-Mihu, Nicoleta A generalization of the Jacobi multiplier (integral invariant). (Romanian. French summary) **81i:70009**
van der Vlist, H. *See* **Ruijgrok, Th. W., 81g:70019**
Vujanović, B. On a gradient method in nonconservative mechanics. (German summary) **81h:70013**
On the field momenta method in mechanics. **81j:70018**

secondary classifications:

van der Aa, Els (*with* Sanders, Jan A.) The 1:2:1-resonance, its periodic orbits and integrals. **(81h:70016)**
Avez, André Représentations de Dirac de l'algèbre de Lie des polynômes en les coordonnées canoniques munie du crochet de Poisson. (English summary) **(81i:17008)**
Bryant, John Sur une réduction du problème des N-corps mettant en évidence une structure de contact. (English summary) **(81d:70009)**
(Četaev, N. G.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
Churchill, Richard C. (*with* Rod, David L.) Pathology in dynamical systems. III. Analytic Hamiltonians. **(81k:58034)**
Devaney, Robert L. Homoclinic orbits to hyperbolic equilibria. **(81i:58023)**
Eliezer, C. J. *See* **Prince, G. E.; et al., (81f:81030)**
Escande, D. F. Primary resonances do not overlap. **(81i:70014)**
Gómez Trapote, Alberto Hamilton waves in the theory of percussions. (Spanish) (*See* **81j:00009**)
González Gascón, F. (*with* Rodríguez-Camino, E.) Symmetries, first integrals, and differential forms of dynamical systems. **(81g:58010)**
(*with* Rodríguez-Camino, E.) New results and open problems concerning the obtention of first integrals and pseudosymmetries of dynamical systems. **(81k:58057)**
(*with* Rodríguez-Camino, E.) On a certain kind of invariant sets of dynamical systems. **(81k:58058)**
Gotay, Mark J. (*with* Nester, James M.) Presymplectic Lagrangian systems. II. The second-order equation problem. **(81m:58033)**
Guillemin, Victor (*with* Sternberg, Shlomo) The moment map and collective motion. **(81g:58011)**
Holmes, Philip J. Periodic, nonperiodic and irregular motions in a Hamiltonian system. **(81m:58034)**
Iacob, Andrei (*with* Sternberg, Shlomo) Coadjoint structures, solitons, and integrability. **(81h:58035)**
Kalotas, T. M. *See* **Prince, G. E.; et al., (81f:81030)**
Kobe, Donald H. Derivation of Maxwell's equations from the gauge invariance of classical mechanics. **(81g:78012)**
Komkov, Vadim A dual form of Noether's theorem with applications to continuum mechanics. **(81e:49036)**
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Lutzky, M. Symmetry groups and conserved quantities for the harmonic oscillator. **(81f:49028)**
Martins, Roberto Vieira Sur la classification des orbites périodiques instables d'après Poincaré. (English summary) **(81e:70012)**
(Matrosov, V. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
Mosauro, Vinicio (*with* Salvadori, L.; Scalia, M.) Total stability and classical Hamiltonian theory. **(81b:58025)**
Mukunda, N. Generators of symmetry transformations for constrained Hamiltonian systems. **(81c:58039)**
Mušicki, Đorđe Généralisation de la méthode de Pfaff-Bilimović pour le formalisme canonique avec les dérivées d'ordre supérieur. (English and Serbo-Croatian summaries) **(81h:49011)**
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(Pančenkov, A. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
Post, E. J. Local versus global conservation and Noether's theorem. **(81m:49048)**
Prince, G. E. (*with* Leach, P. G. L.; Kalotas, T. M.; Eliezer, C. J.; Santilli, Ruggero Maria) The Lie and Lie-admissible symmetries of dynamical systems. **(81f:81030)**
Richardson, David L. Analytic construction of periodic orbits about the collinear points. **(81j:70011)**
Rod, David L. *See* **Churchill, Richard C., (81k:58034)**
Rodríguez-Camino, E. *See* **González Gascón, F., (81g:58010); González Gascón, F., (81k:58057)** *and* **González Gascón, F., (81k:58058)**
Salvadori, L. *See* **Mosauro, Vinicio; et al., (81b:58025)**
Sanders, Jan A. (*with* Verhulst, Ferdinand) Approximations of higher order resonances with an application to Contopoulos' model problem. **(81f:58023)**
See also **van der Aa, Els, (81h:70016)**
Santilli, Ruggero Maria On a possible Lie-admissible covering of the Galilei relativity in Newtonian mechanics for nonconservative and Galilei form-noninvariant systems. **(81g:83004a)**
Addendum to: "On a possible Lie-admissible covering of the Galilei relativity in Newtonian mechanics for nonconservative and Galilei form-noninvariant systems". **(81g:83004b)**
See also **Prince, G. E.; et al., (81f:81030)**
Scalia, M. *See* **Mosauro, Vinicio; et al., (81b:58025)**
Sternberg, Shlomo *See* **Guillemin, Victor, (81g:58011)** *and* **Iacob, Andrei, (81h:58035)**
Verhulst, Ferdinand *See* **Sanders, Jan A., (81f:58023)**
All-Union Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion
★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Analytical mechanics ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Anniversary:
Birth of N. G. Četaev ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion
★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Irkutsk ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Problems of stability of motion, analytical mechanics and control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Stability of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**

70Jxx Linear vibration theory

70J05 Finite degree of freedom systems

Fang, Tong Antiresonances in multi-degree-of-freedom systems. (Chinese. English summary) **81a:70024**
Meirovitch, L. *See* **Ryland, G., II, 81d:70017**
Nagaev, R. F. (*with* Stepanov, A. V.) Optimization of the damping factor of free oscillations for a two-mass system. **81g:70021**

Pospíšil, Jaroslav Study of mechanical and electrical oscillations of two coupled harmonical oscillators. (Czech. Russian and English summaries) **81f:70017**
Ryland, G., II (*with* Meirovitch, L.) Response of vibrating systems with perturbed parameters. **81d:70017**
Stepanov, A. V. *See* **Nagaev, R. F., 81g:70021**

secondary classifications:

Broucke, R. Simple nonintegrable systems with two degrees of freedom. **(81f:58018)**
Contopoulos, G. Instabilities in systems of three degrees of freedom. **(81f:58019)**
Mamalyga, V. M. Synthesis of response-optimal control of a vibrational system. **(81c:70017)**

70J10 Normal modes of vibrations

Barnsley, Michael F. (*with* Duffin, Richard J.) Bounds for the *r*th characteristic frequency of a beaded string or of an electrical filter. **81c:70015**
Duffin, Richard J. *See* **Barnsley, Michael F., 81c:70015**
Sabatier, Pierre C. Around the classical string problem. **81h:70013**

secondary classifications:

Benedek, Agnes (*with* Panzone, Rafael) On the mathematical model of a vibrating mechanical device. **(81d:73057)**
Panzone, Rafael *See* **Benedek, Agnes, (81d:73057)**

70J15 Conservative systems

secondary classifications:

Antonov, V. A. Periodic and conditionally periodic trajectories in conservative systems under minimal conditions of smoothness. I. (Russian. English summary) **(81g:58030a)**
Periodic and conditionally periodic trajectories in conservative systems under minimal conditions of smoothness. II. (Russian. English summary) **(81g:58030b)**
Markeev, A. P. (*with* Sokol'skiĭ, A. G.) Method of studying periodic motions of Ljapunov and Hamiltonian systems and its realization on computer. (Russian. English summary) **(81b:70011)**
Sokol'skiĭ, A. G. *See* **Markeev, A. P., (81b:70011)**

70J20 Nonconservative systems

Chester, W. A general theory of resonance between weakly coupled oscillatory systems. II. Nonconservative systems. **81m:70029**
Indu, B. D. Oscillations in strings. **81h:70014**
Sarlet, Willy On linear nonconservative systems derivable from a variational principle. **81c:70016**

secondary classifications:

Fronteau, Jean Vers une description non conservative de l'évolution en physique. (English summary) **(81a:82027)**
McLaughlin, John B. *See* **Orszag, Steven A., (81d:58041)**
Orszag, Steven A. (*with* McLaughlin, John B.) Evidence that random behavior is generic for nonlinear differential equations. **(81d:58041)**
Peiffer, Karl An example of nonisolated equilibrium with maximum potential, stabilized by dissipative forces. (French summary) **(81b:70014)**
Vujanović, B. On a gradient method in nonconservative mechanics. (German summary) **(81b:70013)**

70J25 Stability

Asner, B. A., Jr. Stability charts for Hill's equation. (French and German summaries) **81c:70023**
Leipholz, H. H. E. On time-invariant functionals for certain mechanical systems subject to follower forces. **81j:70019**
Tasso, H. (*with* Teichmann, Jiri) A stability theorem for systems with discrete parameters and arbitrary circulatory forces. (German summary) **81i:70011**
Teichmann, Jiri *See* **Tasso, H., 81i:70011**

70J99 None of the above, but in this section

Barcilon, V. (*with* Turchetti, Giorgio) Extremal solutions of inverse eigenvalue problems with finite spectral data. **81j:70020**
Iguchi, Masakazu *See* **Shimosaka, Haruo, 81d:70018**
Leipholz, H. H. E. An extension of Mercer's theorem to a class of nonsymmetric integral equations. (German summary) **81j:70021**
Mamalyga, V. M. Synthesis of response-optimal control of a vibrational system. **81c:70017**
Schatzman, Michelle Un problème hyperbolique du 2ème ordre avec contrainte unilatérale: la corde vibrante avec obstacle ponctuel. (English summary) **81h:70015**
Shimosaka, Haruo (*with* Iguchi, Masakazu) Motions of a stretched string under a moving load. **81d:70018**
Turchetti, Giorgio *See* **Barcilon, V., 81j:70020**

secondary classifications:

Amerio, Luigi Unilateral problems for the vibrating string equation. **(81e:35071)**
Hoenders, B. J. On the correct expansion of a Green function into a set of eigenfunctions connected with a non-Hermitian eigenvalue problem considered by Morse. **(81a:35077)**
Hronin, D. V. ★Колебания в двигателях летательных аппаратов. (Russian) [Vibrations in aircraft engines] **(81c:73044)**
Kožešník, Jaroslav ★Kmitání mechanických soustav. (Czech) [Vibration of mechanical systems] **(81j:73030)**
Mosolov, V. E. (*with* Tihonov, V. S.) Determination of the transfer function of a flexible unstretchable thread in the case of three-dimensional flow around it. **(81k:73036)**
Ray, John R. (*with* Reid, James L.) Exact time-dependent invariants for *N*-dimensional systems. **(81k:81019)**
Reid, James L. *See* **Ray, John R., (81k:81019)**
Sabatier, Pierre C. On some spectral problems and isospectral evolutions connected with the classical string problem: I. Constants of motion. **(81h:34034a)**
On some spectral problems and isospectral evolutions connected with the classical string problem. II. Evolution equation. **(81h:34034b)**
Tihonov, V. S. *See* **Mosolov, V. E., (81k:73036)**

70Kxx Nonlinear motions [See also 34Cxx, 58Fxx.]

secondary classifications:

Atherton, D. P. (*with* Dorrah, H. T.) A survey on nonlinear oscillations. **(81g:34041)**
Dorrah, H. T. *See* **Atherton, D. P., (81g:34041)**
Bibliography:
Nonlinear oscillations *See* **Atherton, D. P.; et al., (81g:34041)**

70K05 Phase plane analysis

Hayashi, Chihiro The method of mapping with reference to the doubly asymptotic structure of invariant curves. (French summary) **81k:70015**

secondary classifications:

Ueda, Yoshisuke Steady motions exhibited by Duffing's equation: a picture book of regular and chaotic motions. **(81m:58055)**
Uslenghi, Piergiorgio L. E. An introduction to some mathematical techniques for nonlinear problems. **(81m:00016)**

70K10 Limit cycles

Palm, Enok (*with* Tveitereid, Morten) On coupled van der Pol equations. **81k:70016**
Tveitereid, Morten *See* **Palm, Enok, 81k:70016**

secondary classifications:

Morioka, N. *See* **Shimizu, T., (81k:58048)**
Ottoy, J. P. Study of a nonlinear perturbed oscillator. **(81j:34052)**
Shimizu, T. (*with* Morioka, N.) Chaos and limit cycles in the Lorenz model. **(81k:58048)**
Žermolenko, V. N. On B. V. Bulgakov's problem of the maximum deviation of a second-order oscillatory system. (Russian. English summary) **(81h:34036)**

70K15 Ljapunov theorems

Kotera, Tadashi A new method of determining regions of instability of a system with parametric excitations. **81a:70025**
Martinjuk, A. A. The averaging principle in nonlinear mechanics. (Russian) **81g:70022**

secondary classifications:

Andželčak, I. A. (*with* Kossak, O. M.) Determination of the domains of attraction of steady state motions of nonlinear periodic systems. (Russian) **(81m:34067)**
Kossak, O. M. *See* **Andželčak, I. A., (81m:34067)**

70K20 Stability

Bajkowski, J. *See* **Szemplińska-Stupnicka, W., 81b:70015**
Černeva-Popova, Z. Stability of parametric oscillations in the presence of various dissipative forces (turbulent resistance). (Bulgarian. Russian and French summaries) **81f:70018**
Dickey, R. W. Stability of periodic solutions of the nonlinear string. **81m:70030**
Huseyin, K. *See* **Mandadi, V., 81k:70017**
Košljakov, V. M. Stability of a rotating arm. **81f:70019**
Kotera, Tadashi (*with* Yano, Sumio) Instability of motion of a disc supported by an asymmetric shaft in asymmetric bearings (influence of external damping). **81g:70023**
Mandadi, V. (*with* Huseyin, K.) Nonlinear bifurcation analysis of nongradient system. (French and German summaries) **81k:70017**
Martinjuk, A. A. The Čaplygin-Ljapunov comparison principle in nonlinear mechanics. (Russian. English and Serbo-Croatian summaries) **81f:70020**
Nguyen Van Khang Zur Berechnung der dynamischen Stabilitätsbedingungen und periodischen Schwingungen des Gestells ebener Mechanismen. **81i:70012**
Nikolenko, I. V. Stability of the transient motion of a class of nonholonomic systems. (Ukrainian. English and Russian summaries) **81f:70021**
Peiffer, Karl An example of nonisolated equilibrium with maximum potential, stabilized by dissipative forces. (French summary) **81b:70014**
Rubanovskiĭ, V. N. (*with* Rumjancev, V. V.) The stability of motion for complex mechanical systems. (Russian. English summary) **81c:70018**
Rumjancev, V. V. *See* **Rubanovskiĭ, V. N., 81c:70018**
Szemplińska-Stupnicka, W. (*with* Bajkowski, J.) Multiharmonic response in the regions of instability of harmonic solution in multidegree-of-freedom nonlinear systems. (French and German summaries) **81b:70015**
Yano, Sumio *See* **Kotera, Tadashi, 81g:70023**

secondary classifications:

Ariaratnam, S. T. Bifurcation in nonlinear stochastic systems. **(81i:70017)**
Balenov, V. A. (*with* Guljaev, V. I.) Investigation of the trajectory of loading of mechanical systems with unilateral constraints by the linear programming method. (Russian. English summary) **(81a:49022)**
Beleckiĭ, V. V. (*with* Levin, E. M.; Pogorelov, D. Ju.) On the problem of the resonance rotation of Venus. **(81h:70004)**
Guljaev, V. I. *See* **Balenov, V. A., (81a:49022)**
Karapetjan, A. V. Some problems of stability of motion of nonholonomic systems. (Russian) **(81i:70003)**
Karmakar, S. B. Steady-state stability of a synchronous machine. **(81h:78030)**
Kremenstuio, V. V. The active stabilization of a rotating motion of a solid body that carries a mass point. (Russian) **(81m:70010)**
Kuz'mina, L. K. On a question of the solutions of some systems of differential equations with a small parameter multiplying the derivatives. (Russian) **(81k:34039)**
Levin, E. M. *See* **Beleckiĭ, V. V.; et al., (81h:70004)**
Markus, Lawrence Jets and geneticity in qualitative dynamics. **(81k:58040)**
Michel, Anthony N. *See* **Miller, Richard K., (81b:93052)**
Miller, Richard K. (*with* Michel, Anthony N.) Asymptotic stability of systems: results involving the system topology. **(81b:93052)**
Pogorelov, D. Ju. *See* **Beleckiĭ, V. V.; et al., (81h:70004)**
Rumjancev, V. V. On the influence of gyroscopic and dissipative forces on the stability of steady-state motion. **(81e:70010)**
Simó, Carlos Invariant curves near parabolic points and regions of stability. **(81m:58035)**
Sokol'skiĭ, A. G. The stability of Hamiltonian systems with first-order resonance. (Russian) **(81g:70020)**
Spirig, Franz A generalization of Hopf's bifurcation problem. **(81d:34033)**

70K30 Nonlinear resonances

van der Aa, Els (*with* Sanders, Jan A.) The 1:2:1-resonance, its periodic orbits and integrals. **81h:70016**
B"čvarov, S. N. Longitudinal single-frequency resonant oscillations of mechanical systems with periodic structure and dissipative relations. (Bulgarian. Russian and English summaries) **81e:70024**
Cel'man, F. H. Resonances in some problems of classical mechanics. (Russian) **81i:70013**
Chester, W. A general theory of resonance between weakly coupled oscillatory systems. **81g:70024**
Conte, M. (*with* Dellavalle, G.; Rizzitelli, Giuseppe) Resonant oscillations driven by a nonlinear forcing term. (Italian and Russian summaries) **81e:70025**
Dellavalle, G. *See* **Conte, M.; et al., 81e:70025**
Escande, D. F. Primary resonances do not overlap. **81i:70014**
Ganiev, R. F. Resonance phenomena in nonlinear oscillations of mechanical systems. (Russian) **81h:70017**
Kevorkian, J. Resonance in a weakly nonlinear system with slowly varying parameters. **81a:70026**
Neu, John C. The method of near-identity transformations and its applications. **81m:70031**
Pasynkova, I. A. Periodic motions of a system with three degrees of freedom with two internal resonances. (Russian. English summary) **81k:70018**
Rizzitelli, Giuseppe *See* **Conte, M.; et al., 81e:70025**
Sanders, Jan A. *See* **van der Aa, Els, 81h:70016**

secondary classifications:

Češankov, B. (*with* Simeonova, D.) Oscillations of a class of autonomous systems in the case of resonance of mixed second and third rank. (Bulgarian. Russian and English summaries) **(81c:34032)**
Kai, Tohru *See* **Tomita, Kazuhisa, (81k:58049)**
Katayama, K. (*with* Katayama, T.; Sekiya, T.) On the qualitative study of combination resonance in elastic systems under periodic forces. **(81f:73012)**
Katayama, T. *See* **Katayama, K.; et al., (81f:73012)**
Masui, K. *See* **Wang, P. K. C., (81k:82038)**
Sanders, Jan A. (*with* Verhulst, Ferdinand) Approximations of higher order resonances with an application to Contopoulos' model problem. **(81f:58023)**
On the passage through resonance. **(81c:34046)**
Sekiya, T. *See* **Katayama, K.; et al., (81f:73012)**
Sidorov, I. M. (*with* Timofeev, V. V.) Analysis of nonlinear automatic control systems in a resonance region. **(81g:93047)**
Simeonova, D. *See* **Češankov, B., (81c:34032)**
Szemplińska-Stupnicka, W. The effects of geometric nonlinearities on the resonant phenomena in multidegree-of-freedom systems. (German and Russian summaries) **(81b:73012)**
Timofeev, V. V. *See* **Sidorov, I. M., (81g:93047)**
Tomita, Kazuhisa (*with* Kai, Tohru) Stroboscopic phase portrait and strange attractors. **(81k:58049)**
Verhulst, Ferdinand *See* **Sanders, Jan A., (81f:58023)**
Wang, P. K. C. (*with* Masui, K.) Intermittent phase unlocking in a resonant three-wave interaction with parametric excitation. **(81k:82038)**

70K40 Forced motions

70K50 Transition to stochasticity [See also 58F13.]

70K99 None of the above, but in this section

Alifov, A. A. (*with* Frolov, K. V.) Investigation of self-excited oscillations with friction, under conditions of parametric excitation and bounded power of the energy source. **81f:70022**
Andronov, V. V. Vibrational displacement along an impulsively perturbed inclined plane. **81d:70019**
Arnaudov, K. *See* **B"čvarov, S. N., 81i:70015a** *and* **B"čvarov, S. N., 81i:70015b**
B"čvarov, S. N. (*with* Arnaudov, K.) Differential equations of the motion of a "simple" automobile with account of the interaction with the motor. (Bulgarian. Russian and English summaries) **81i:70015a**
(*with* Arnaudov, K.) Single-frequency forced oscillations of a "simple" automobile. (Bulgarian. Russian and German summaries) **81i:70015b**
Berkovič, L. M. (*with* Nečaevskiĭ, M. L.) Transformation methods in nonlinear and non-steady-state problems of mechanics. (Russian) **81f:70023**
Frolov, K. V. *See* **Alifov, A. A., 81f:70022**
Grasman, J. Relaxation oscillations of a van der Pol equation with large critical forcing term. **81g:70025**
Hodžaev, K. Š. Successive substitutions in perturbation theory. (Russian) **81a:70027**
Lutzky, M. An application of Ray-Reid invariants. **81g:70026**
Munteanu, Marius *See* **Rădoi, Marin, 81f:70024**
Nečaevskiĭ, M. L. *See* **Berkovič, L. M., 81f:70023**
Nocilla, Silvio Systems with clearances with two degrees of freedom: study of the steady forced vibrations. (Italian. English summary) **81c:70019**
Rădoi, Marin (*with* Munteanu, Marius) The dynamics of noncentered vibration machines driven by vibration generators with unbalanced mass. (Romanian. English summary) **81f:70024**
Ray, John R. *See* **Reid, James L., 81h:70018**
Reid, James L. (*with* Ray, John R.) Ermakov systems, nonlinear superposition, and solutions of nonlinear equations of motion. **81h:70018**
Sereda, N. V. Fundamental frequencies and forms of the principal longitudinal-torsion vibrations of shaft support and counterbalancing cables of variable length. (Russian) **81i:70016**
Skripnik, A. I. On certain algebras connected with asymptotic methods of nonlinear mechanics. (Russian) **81e:70026**
Stoker, J. J. Periodic vibrations of systems of relaxation oscillators. **81f:70025**

secondary classifications:

d'Acunto, Berardino Theorem of the energy in the elastic impact of a string in a nonlinear case. (Italian. English summary) **(81j:73031)**
Antman, Stuart S. The equations for large vibrations of strings. **(81e:73027)**
Arnéodo, A. *See* **Coullet, P.; et al., (81m:58057)**
Brézis, Haim Cordes vibrantes non linéaires. **(81a:35065)**
Cabannes, Henri (*with* Haraux, Alain) Mouvements presque-périodiques d'une corde vibrante en présence d'un obstacle rectiligne. (English summary) **(81k:35084)**
Coullet, P. (*with* Tresser, C.; Arnéodo, A.) Transition to stochasticity for a class of forced oscillators. **(81m:58057)**
Delft, Percy (*with* Lund, Fernando; Trubowitz, Eugene) Nonlinear wave equations and constrained harmonic motion. **(81g:35107)**
Gataullin, I. R. *See* **Sazonov, V. V., (81g:34052)**
Guckenheimer, John Symbolic dynamics and relaxation oscillations. **(81j:58060)**
Gumowski, Igor (*with* Mira, Christian) ★Recurrence and discrete dynamic systems. **(81m:58052)**
Haraux, Alain *See* **Cabannes, Henri, (81k:35084)**
Hronin, D. V. ★Колебания в двигателях летательных аппаратов. (Russian) [Vibrations in aircraft engines] **(81c:73044)**
Klainerman, Sergiu (*with* Majda, Andrew) Formation of singularities for wave equations including the nonlinear vibrating string. **(81f:35080)**
(Lavrent'ev, M. A.) *See* **Theoretical and applied mechanics, (81k:76048)**
Lund, Fernando *See* **Delft, Percy; et al., (81g:35107)**
Majda, Andrew *See* **Klainerman, Sergiu, (81f:35080)**
(Mihailov, G. K.) *See* **Theoretical and applied mechanics, (81k:76048)**
Mira, Christian *See* **Gumowski, Igor, (81m:58052)**
Papadrakakis, M. A method for the automatic evaluation of the dynamic relaxation parameters. **(81k:65038)**
Ray, John R. (*with* Reid, James L.) Ermakov systems, Noether's theorem and the Sarlet-Bahar method. **(81h:70007)**
Reid, James L. *See* **Ray, John R., (81h:70007)**
Sazonov, V. V. (*with* Gataullin, I. R.) Forced periodic oscillations of a mathematical pendulum with friction. (Russian) **(81g:34052)**
Schatzman, Michelle A hyperbolic problem of second order with unilateral constraints: the vibrating string with a concave obstacle. **(81d:35047)**
Tresser, C. *See* **Coullet, P.; et al., (81m:58057)**
Trubowitz, Eugene *See* **Delft, Percy; et al., (81g:35107)**
Delft ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**
IUTAM Congress:
Theoretical and Applied Mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**
Mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**
Theoretical and applied mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**

70L05 Random vibrations [See also 93Exx.]

Antonov, I. L. Properties with probability one of trajectories of a linear oscillator that is excited by a steady-state random force. (Russian. English summary) **81g:70027**
Ariaratnam, S. T. Bifurcation in nonlinear stochastic systems. **81i:70017**
Crandall, Stephen H. Random vibration of one- and two-dimensional structures. **81d:70020**

Non-Gaussian closure for random vibration of nonlinear oscillators. (French summary) **81k:70019**

Curtain, Ruth F. Mathematical models for random vibration problems. **81m:70032**

Dimentberg, M. F. (*with* Menjailov, A. I.) Response of a single-mass vibroimpact system to white-noise random excitation. (German and Russian summaries) **81e:70027**

Dombrovskiĭ, V. A. (*with* Kolomiĕc', V. G.) A study of multifrequency random oscillations in systems with distributed parameters. (Russian) **81h:70019**

Fujita, Takafumi (*with* Hattori, Shinobu) Stationary random vibration of a nonlinear system with collision. **81d:70021**

Gončarenko, V. M. (*with* Malovičko, V. O.) A boundary value problem that arises in the theory of random oscillations of dynamical systems. (Russian. English summary) **81f:70026**

Hattori, Shinobu *See* **Fujita, Takafumi, 81d:70021**

Hrisanov, S. M. (*with* Ružnikov, G. M.) Stability of dynamical systems with random parameters. (Russian) **81g:70028**

Iwan, W. D. (*with* Mason, A. B., Jr.) Equivalent linearization for systems subjected to nonstationary random excitation. (French and German summaries) **81e:70028**

Johnson, James P. (*with* Scott, Richard A.) Extension of eigenfunction-expansion solutions of a Fokker-Planck equation. I. First order system. (French and German summaries) **81i:70018a**

(*with* Scott, Richard A.) Extension of eigenfunction-expansion solutions of a Fokker-Planck equation. II. Second order system. (French and German summaries) **81i:70018b**

Kolomiĕc', V. G. *See* **Dombrovskiĭ, V. A., 81h:70019**

Malovičko, V. O. *See* **Gončarenko, V. M., 81f:70026**

Mason, A. B., Jr. *See* **Iwan, W. D., 81e:70028**

Menjailov, A. I. *See* **Dimentberg, M. F., 81g:70027**

Müller, P. C. (*with* Popp, K.) Kovarianzanalyse von linearen Zufallsschwingungen mit zeitlich verschobenen Erregerprozessen. **81c:70020**

Ozaki, T. Nonlinear time series models for nonlinear random vibrations. **81c:70021**

Pfaffinger, Dieter D. Analytical evaluation of modal covariance matrices. **81k:70020**

Popp, K. *See* **Müller, P. C., 81c:70020**

Ružnikov, G. M. *See* **Hrisanov, S. M., 81g:70028**

Scott, Richard A. *See* **Johnson, James P., 81i:70018a** *and* **Johnson, James P., 81i:70018b**

Szopa, Romuald Functions of the moments for the solution of stochastic transient dynamical systems with two degrees of freedom. (Polish. Russian and English summaries) **81h:70020**

Wan, Frederic Y. M. Flapping response of lifting rotor blades to spanwise nonuniform random excitation. **81g:70029**

secondary classifications:

Andasov, M. A. *See* **Tulegenov, M. U., (81h:73019)**

Bass, J. Moyennes et mesures en mécanique quantique et en mécanique classique. (English summary) **(81m:81023)**

Bismut, Jean-Michel Diffusions hamiltoniennes, optimalité stochastique et équations de Hamilton-Jacobi. (English summary) **(81m:70027)**

Friedrich, Hermann Determination of the first passage probability in stationary random processes. **(81m:60057)**

Fufaev, N. A. *See* **Musarskiĭ, R. A., (81g:70015)**

Gómez-Allende, M.ª Dolores Maravall A contribution to the theory of the stochastic pendulum. (Spanish. English summary) **(81m:60103)**

Kolesnik, Jaroslav ★Kmitání mechanických soustav. (Czech) [Vibration of mechanical systems] **(81j:73030)**

Kuz'ma, V. M. Application of the averaging method in the investigation of random oscillations of rigid and elastic bodies. (Russian. Bulgarian and English summaries) **(81i:34040)**

Muhitdinov, T. M. Random oscillations of systems with impulse action. (Russian) **(81e:34043)**

Musarskiĭ, R. A. (*with* Fufaev, N. A.) Behavior of a nonholonomic system under external actions. **(81g:70015)**

Purkert, Walter (*with* vom Scheidt, Jürgen) Zur approximativen Lösung des Mittelungsproblems für die Eigenwerte stochastischer Differentialoperatoren. (English and Russian summaries) **(81h:60083)**

vom Scheidt, Jürgen *See* **Purkert, Walter, (81h:60083)**

Tulegenov, M. U. (*with* Andasov, M. A.) Investigation of random oscillations of a bellows. (Russian. Kazakh summary) **(81h:73019)**

70Mxx Orbital mechanics

70M05 Satellite problems

Ahmed, Nasiruddin (*with* Sen, A. K.) Stability and control of a trap mode in synchronous orbit. **81e:70029**

Balli, Raffaele (*with* Nucci, Maria Clara) The rotations of a gyrostatic satellite in a circular orbit. (Italian. English summary) **81g:70030**

Bottema, Oene A question arising from space-flight. (Dutch) **81m:70033**

Broucke, R. Traveling between the Lagrange points and the Moon. **81b:70016**

Cid Palacios, Rafael (*with* Lahulla, José F.) The application of the process of invariance to the short- and long-period perturbations in an artificial satellite. (Spanish) (*See* **81j:00009**)

Claes, H. Analytical theory of earth's artificial satellites (A.T.E.A.S.). **81e:70030**

Georgiev, N. Power series for perturbations of coordinates of intermediate motion from zonal harmonics of the geopotential. (Russian. English summary) **81i:70019**

Determination of coordinates of intermediate motion of a satellite by means of power series on regularized time. (Russian. English summary) **81j:70022**

Hughes, S. Earth satellite orbits with resonant lunisolar perturbations. I. Resonances dependent only on inclination. **81i:70020**

Jupp, Alan H. The critical inclination problem with small eccentricity. I. General theory. **81d:70022**

Lahulla, José F. *See* **Cid Palacios, Rafael, (*See* 81j:00009)**

Liu, Lin (*with* Zhao, De Zi) The solution of second-order perturbation of an artificial Earth satellite. (Chinese. English summary) **81j:70023**

Meirovitch, L. *See* **Öz, H., 81d:70023**

Mioc, V. (*with* Radu, E.) Perturbations in the anomalistic period of artificial satellites caused by the direct solar radiation pressure. (French summary) **81a:70028**

Mišoň, Karel Pencil of orbits with variable launching direction. **81f:70027**

Noskov, B. N. Long-period perturbations in satellite motion caused by oblateness of the Earth's atmosphere. (Russian. English summary) **81g:70031**

Nucci, Maria Clara *See* **Balli, Raffaele, 81g:70030**

Öz, H. (*with* Meirovitch, L.) Optimal modal-space control of flexible gyroscopic systems. **81d:70023**

Popescu, Mihai La détermination de l'extrémum absolu de la classe des extrémales admissibles concernant le transfert des véhicules spatiaux des points colinéaires de libration du système terre-lune à la distance maximum. **81f:70028**

Pucci, Edvige On a class of semiregular precessions of a gyrostatic satellite in circular orbit. **81j:70024**

Radu, E. *See* **Mioc, V., 81a:70028**

Ramnath, Rudrapatna V. (*with* Tao, Yee Chee) Nonlinear attitude dynamics of satellites. (*See* **81h:00006**)

Sen, A. K. *See* **Ahmed, Nasiruddin, 81e:70029**

Tao, Yee Chee *See* **Ramnath, Rudrapatna V., (*See* 81h:00006)**

Tong, Fu (*with* Wu, Lian Da; Wang, Chang Bin) Recurrence relations of the inclination function. **81b:70017**

Totaro, Carmelo On particular movements of an artificial satellite. (Italian. English summary) **81g:70032**

Wang, Chang Bin *See* **Tong, Fu; et al., 81b:70017**

Wu, Lian Da *See* **Tong, Fu; et al., 81b:70017**

Yuan, J. S.-C. Deadbeat nutation controller for momentum bias stabilized spacecraft. **81d:70024**

Zhao, De Zi *See* **Liu, Lin, 81j:70023**

secondary classifications:

Calise, Anthony J. Optimal thrust control with proportional navigation guidance. **(81e:93047)**

Cid Palacios, Rafael (*with* Correas Dobato, José M.) The canonical forms of the motion of a rigid body around its center of mass. (Spanish. English summary) **(81m:70012)**

Correas Dobato, José M. *See* **Cid Palacios, Rafael, (81m:70012)**

Hermes, Henry On a stabilizing feedback attitude control. **(81m:93057)**

Kiričenko, N. F. (*with* Koval'skiĭ, I. P.; Kudin, G. I.) Practical stability and stabilization of systems with a changing mathematical model. (Russian) **(81h:93083)**

Koval'skiĭ, I. P. *See* **Kiričenko, N. F.; et al., (81h:93083)**

Kudin, G. I. *See* **Kiričenko, N. F.; et al., (81h:93083)**

Markellos, Vassilis *See* **Robin, I. A., (81a:70030)**

Nabjullin, M. K. Stability of relative equilibriums of a satellite-gyrostat in axially symmetric fields. (Russian) **(81j:70004)**

Robin, I. A. (*with* Markellos, Vassilis) Numerical determination of three-dimensional periodic orbits generated from vertical self-resonant satellite orbits. **(81a:70030)**

Roy, Archie E. ★Orbital motion. **(81j:70012)**

Sesekin, A. N. Optimization of integral quadratic deviation with a bounded control resource. (Russian) **(81b:93016)**

Vaĭkov'jak, S. N. Representation of a shadow function in the form of a series in degrees of eccentricity of a satellite's orbit. (Russian. English summary) **(81k:85005)**

70M10 Orbital stability

Garfinkel, Boris On the stability of resonant motion in the light of the regularizing function. **81a:70029**

Markellos, Vassilis *See* **Robin, I. A., 81a:70030**

Robin, I. A. (*with* Markellos, Vassilis) Numerical determination of three-dimensional periodic orbits generated from vertical self-resonant satellite orbits. **81a:70030**

Simó, Carlos Toroidal stability in the field of a finite primary. (Spanish) **81m:70034**

secondary classifications:

Kinjapin, S. D. A bifurcation in a relay system. **(81a:93076)**

70M99 None of the above, but in this section

Balas, Mark J. *See* **Juang, J. N., 81e:70031**

Juang, J. N. (*with* Balas, Mark J.) Dynamics and control of large spinning spacecraft. **81e:70031**

Kane, Thomas R. (*with* Levinson, David A.) Large motions of unrestrained space trusses. **81e:70032**

Klimko, A. S. (*with* Šmyrov, A. S.) Properties of optimal transfers in central fields. (Russian) **81e:70033**

Korolev, V. S. *See* **Kovalenko, A. N., 81g:70033**

Kovalenko, A. N. (*with* Korolev, V. S.) On the determination of the optimum coplanar two-impulse transfer between weakly elliptic orbits. (Russian) **81g:70033**

Levinson, David A. *See* **Kane, Thomas R., 81e:70032**

Šmyrov, A. S. *See* **Klimko, A. S., 81e:70033**

secondary classifications:

Camarena Badía, V. Canonical transformations in the optimization of trajectories. (Spanish. English summary) **(81m:70028)**

Čečel'nickiĭ, A. M. ★Экстремальность, устойчивость, резонансность в астродинамике и космонавтике. (Russian) [Extremality, stability, and resonance in

astrodynamics and cosmonautics] (81m:85004)
Hughes, Peter C. (*with* Skelton, Robert E.) Controllability and observability for flexible spacecraft. (81f:93020)
Lunsden, Charles J. (*with* Trainor, Lynn E. H.) A generalized canonical approach to the statistical mechanics of constrained systems. (81m:82009)
(Narimanov, G. S.) *See* Čečel'nickiĭ, A. M., (81m:85004)
Skelton, Robert E. *See* Hughes, Peter C., (81f:93020)
Trainor, Lynn E. H. *See* Lunsden, Charles J., (81m:82009)

70N05 Exterior ballistics

Tanzi Cattabianchi, Luigi The influence of the Levi-Civita effect on time formulas: a comparison theorem. (Italian. English summary) 81g:70034
Wu, Julian J. A computer program and approximate solution formulation for gun motions analysis. 81a:70031

secondary classifications:

Shen, C. N. Sensitivity coefficient of exterior ballistics with velocity square damping. (*See* 80m:73002)

70P05 Variable mass, rockets

secondary classifications:

Atherton, D. P. *See* Rao, S. Vittal, (81m:49035)
Magnaradze, N. G. On the motion of two bodies of variable masses in a Newtonian gravitational field. (Russian. Georgian and English summaries) (81i:70001)
Rao, S. Vittal (*with* Atheron, D. P.) Near optimal regulators for large scale systems using Routh approximant reduced order models. (81m:49035)
Whittaker, J. M. Dynamics with variable masses. (81k:70008)

70Q05 Control of mechanical systems [See also 49Exx, 90D25, 90D26, 93Cxx, 93Dxx.]

73-XX MECHANICS OF SOLIDS

73–01 Elementary exposition, textbooks

Germain, Paul (*with* Muller, Patrick) ★Introduction à la mécanique des milieux continus. (French) [Introduction to the mechanics of continuous media] 81m:73001
Muller, Patrick *See* Germain, Paul, 81m:73001
Spencer, A. J. M. ★Continuum mechanics. 81k:73001
Truesdell, Clifford Ambrose ★A first course in rational continuum mechanics. Vol. 1. 81a:73001

secondary classifications:

(Bragg, Lawrence) *See* Feynman, Richard R.; et al., (81a:78001c)
(Efremov, A. V.) *See* Feynman, Richard R.; et al., (81a:78001b) *and* (81a:78001c)
Feynman, Richard R. (*with* Leighton, Robert B.; Sands, Matthew) ★Фейнмановские лекции по физике. 5. Электричество и магнетизм. (Russian) [Feynman lectures in physics. 5. Electricity and magnetism] (81a:78001a)
(*with* Leighton, Robert B.) ★Фейнмановские лекции по физике. 6. Электродинамика. (Russian) [Feynman lectures in physics. 6. Electrodynamics] (81a:78001b)
(*with* Leighton, Robert B.; Sands, Matthew) ★Фейнмановские лекции по физике. 7. Физика сплошных сред. (Russian) [Feynman lectures in physics. 7. Continuum physics] (81a:78001c)
(Kopylov, G. I.) *See* Feynman, Richard R.; et al., (81a:78001a) *and* Feynman, Richard R.; et al., (81a:78001b)
Leighton, Robert B. *See* Feynman, Richard R.; et al., (81a:78001a); Feynman, Richard R., (81a:78001b) *and* Feynman, Richard R.; et al., (81a:78001c)
(Nye, J. F.) *See* Feynman, Richard R.; et al., (81a:78001c)
Sands, Matthew *See* Feynman, Richard R.; et al., (81a:78001a) *and* Feynman, Richard R.; et al., (81a:78001c)
(Simonov, Ju. A.) *See* Feynman, Richard R.; et al., (81a:78001a); Feynman, Richard R.; et al., (81a:78001b) *and* Feynman, Richard R.; et al., (81a:78001c)
(Smorodinskiĭ, Ja. A.) *See* Feynman, Richard R.; et al., (81a:78001a); Feynman, Richard R.; et al., (81a:78001b) *and* Feynman, Richard R.; et al., (81a:78001c)

73–02 Advanced exposition (research surveys, monographs, etc.)

Babeĭko, V. A. *See* Vorovič, I. I., 81b:73002
Badalov, F. B. ★Метод степенных рядов в нелинейной наследственной теории вязкоупругости. (Russian) [The method of power series in the nonlinear hereditary theory of viscoelasticity] 81m:73002
Bose, S. K. On present day work in elasticity. 81d:73001
Gorikov, A. G. Interaction of shock waves with deformable obstacles. (Russian) 81m:73003
Gubanova, I. I. *See* Panovko, Ja. G., 81b:73001
Hall, Arthur Stanley (*with* Woodhead, Ronald W.) ★Frame analysis. 81m:73004
Hudson, John Arthur ★The excitation and propagation of elastic waves. 81h:73001
Huseyin, K. *See* Leipholz, H. H. E.; et al., 81e:73001
Leipholz, H. H. E. (*with* Huseyin, K.; Życzkowski, M.) ★Stability of elastic structures. 81e:73001
Morozov, E. M. (*with* Nikiškov, G. P.) ★Метод конечных элементов в механике разрушения. (Russian) [The finite element method in fracture mechanics] 81m:73005
Nikiškov, G. P. *See* Morozov, E. M., 81m:73005
Panovko, Ja. G. (*with* Gubanova, I. I.) ★Устойчивость и колебания упругих систем. (Russian) [Stability and oscillations of elastic systems] 81b:73001
(Ševljakov, Ju. A.) *See* Interaction in the mechanics of constructions, 81m:73007
Suslova, N. N. Methods for the solution of three-dimensional problems of the theory of elasticity for bodies with a parallelepiped form. (Russian) 81m:73006
Vorovič, I. I. (*with* Babeĭko, V. A.) ★Динамические смешанные задачи теории упругости для неклассических областей. (Russian) [Dynamic mixed problems of the theory of elasticity for nonclassical domains] 81b:73002
Woodhead, Ronald W. *See* Hall, Arthur Stanley, 81m:73004
Życzkowski, M. *See* Leipholz, H. H. E.; et al., 81e:73001
Interaction in the mechanics of constructions ★Взаимодействие в механике конструкций. (Russian) [Interaction in the mechanics of constructions] 81m:73007
Mechanics ★Взаимодействие в механике конструкций. (Russian) [Interaction in the mechanics of constructions] 81m:73007

secondary classifications:

Klee, Klaus-Dieter ★Theoretische und numerische Behandlung geometrisch nichtlinearer viskoplastischer Kontinua. (German) [Theoretical and numerical treatment of geometrically nonlinear viscoplastic continua] (81j:73042)
Kljušnikov, V. D. ★Математическая теория пластичности. (Russian) [Mathematical theory of plasticity] (81j:73036)
Lewin, Basil H. A new phenomenological approach to dimensional analysis. (81m:00015)
Mayhoub, Salah Abbas A. ★Randwertaufgaben zu den Thermoelastizitätsgleichungen mit Hilbertraummethoden. (German) [Boundary value problems for equations of thermoelasticity with Hilbert space methods] (81j:73084)

73–03 Historical (must also be assigned at least one classification number from Section 01)

Fichera, Gaetano The Italian contribution to the mathematical theory of elasticity. (Italian) 81d:73002
Guz', O. M. The development of research in the mechanics of a deformable solid body in the Academy of Sciences of the Ukrainian SSR. (Russian) 81c:73001

secondary classifications:

Janouch, F. ★Lev D. Landau: his life and work. (81f:01031)
(Landau, Lev D.) *See* Janouch, F., (81f:01031)
Bibliography:
Landau, Lev D. *See* Janouch, F., (81f:01031)
Biography:
Landau, Lev D. *See* Janouch, F., (81f:01031)

73–04 Explicit machine computation and programs (not the theory of computation or programming)

73–05 Experimental papers

Apostol, D. Matricial theory in classical photoelasticity. (Romanian. English summary) 81j:73001

73–06 Proceedings, conferences, etc.

(Baiocchi, M. O.) *See* Some problems of the theory of elasticity, 81m:73011
(Černyh, K. F.) *See* Studies in elasticity and plasticity, 81k:73002
(Huang, C. L. D.) *See* Proceedings: Midwestern Mechanics Conference, 81m:73010
(Ignaczak, Józef) *See* Problems of the thermomechanics of elastic bodies, 81f:73001
(Kirmser, P. G.) *See* Proceedings: Midwestern Mechanics Conference, 81m:73010
(Knops, R. J.) *See* Nonlinear analysis and mechanics: Heriot-Watt Symposium, 81e:73003 *and* Nonlinear analysis and mechanics: Heriot-Watt Symposium, 81i:73001
(Koiter, Warner Tjardus) *See* Theory of shells, 81c:73003
(Kordzadze, R. A.) *See* Differential and integral equations. Boundary value problems, 81j:73002
(Kuznecov, G. B.) *See* Problems in the theory of elasticity and viscoelasticity, 81c:73002
(Mihailov, G. K.) *See* Theory of shells, 81c:73003
(Morozov, N. F.) *See* Studies in elasticity and plasticity, 81k:73002
(Nemat-Nasser, S.) *See* Mechanics today, 81j:73003
(Oden, J. Tinsley) *See* Computational methods in nonlinear mechanics, 81e:73002
(Sinha, S. C.) *See* Proceedings: Midwestern Mechanics Conference, 81m:73010
(Vekua, I. N.) *See* Theory of shells, 81c:73003 *and* Differential and integral equations. Boundary value problems, 81j:73002
Washizu, Kyuichiro Complementary variational principles in elasticity and plasticity. 81c:73004
(Wittke, W.) *See* Numerical methods in geomechanics, 81m:73009
(Zorski, Henryk) *See* Trends in applications of pure mathematics to mechanics, 81a:73003
Aachen ★Numerical methods in geomechanics, Aachen 1979. Vol. IV. 81m:73009
Applications of pure mathematics to mechanics ★Trends in applications of pure mathematics to mechanics. Vol. II. 81a:73003
Austin, Tex. ★Computational methods in nonlinear mechanics. 81e:73002
Balatonszemes ★Special issue on large elastic deformation of discrete systems. 81a:73002
Boundary value problems ★Дифференциальные и интегральные уравнения. Краевые задачи. (Russian) [Differential and integral equations. Boundary value problems] 81j:73002
Colloquium:
Euromech ★Special issue on large elastic deformation of discrete systems. 81a:73002

Computational methods in nonlinear mechanics ★Computational methods in nonlinear mechanics. **81e:73002**
Computers ★Mechanika i komputer. Tom 2. (Polish) [Mechanics and computers. Vol. 2] **81m:73008**
Conference:
Computational Methods in Nonlinear Mechanics ★Computational methods in nonlinear mechanics. **81e:73002**
Midwestern Mechanics ★Proceedings of the 16th Midwestern Mechanics Conference. **81m:73010**
Numerical Methods in Geomechanics ★Numerical methods in geomechanics, Aachen 1979. Vol. IV. **81m:73009**
Continuum mechanics ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **81k:73002**
Differential and integral equations. Boundary value problems ★Дифференциальные и интегральные уравнения. Краевые задачи. (Russian) [Differential and integral equations. Boundary value problems] **81j:73002**
Discrete systems ★Special issue on large elastic deformation of discrete systems. **81a:73002**
Elastic bodies ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] **81f:73001**
Elasticity ★Вопросы теории упругости и вязкоупругости. (Russian) [Problems in the theory of elasticity and viscoelasticity] **81c:73002**
★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **81k:73002**
★Некоторые задачи теории упругости. (Russian) [Some problems of the theory of elasticity] **81m:73011**
Euromech ★Special issue on large elastic deformation of discrete systems. **81a:73002**
Geomechanics ★Numerical methods in geomechanics, Aachen 1979. Vol. IV. **81m:73009**
IUTAM Symposium:
Shell Theory ★Theory of shells. **81c:73003**
Kozubnik ★Trends in applications of pure mathematics to mechanics. Vol. II. **81a:73003**
Manhattan, Kan. ★Proceedings of the 16th Midwestern Mechanics Conference. **81m:73010**
Mechanics ★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. II. **81e:73003**
★Trends in applications of pure mathematics to mechanics. Vol. II. **81a:73003**
★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. **81i:73001**
★Proceedings of the 16th Midwestern Mechanics Conference. **81m:73010**
Mechanics and computers ★Mechanika i komputer. Tom 2. (Polish) [Mechanics and computers. Vol. 2] **81m:73008**
Mechanics today ★Mechanics today. Vol. 5. **81j:73003**
Nonlinear analysis and mechanics: Heriot-Watt Symposium ★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. II. **81e:73003**
★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. **81i:73001**
Nonlinear mechanics ★Computational methods in nonlinear mechanics. **81e:73002**
Numerical methods in geomechanics ★Numerical methods in geomechanics, Aachen 1979. Vol. IV. **81m:73009**
Plasticity ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **81k:73002**
Problems in the theory of elasticity and viscoelasticity ★Вопросы теории упругости и вязкоупругости. (Russian) [Problems in the theory of elasticity and viscoelasticity] **81c:73002**
Problems of the thermomechanics of elastic bodies ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] **81f:73001**
Proceedings:
Midwestern Mechanics Conference ★Proceedings of the 16th Midwestern Mechanics Conference. **81m:73010**
Shell theory ★Theory of shells. **81c:73003**
Some problems of the theory of elasticity ★Некоторые задачи теории упругости. (Russian) [Some problems of the theory of elasticity] **81m:73011**
Special issue:
Large elastic deformation of discrete systems ★Special issue on large elastic deformation of discrete systems. **81a:73002**
Studies in elasticity and plasticity ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **81k:73002**
Symposium:
Heriot-Watt, Nonlinear Analysis and Mechanics ★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. II. **81e:73003**
★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. **81i:73001**
Trends in Applications of Pure Mathematics to Mechanics ★Trends in applications of pure mathematics to mechanics. Vol. II. **81a:73003**
Tbilisi ★Theory of shells. **81c:73003**
Theory of shells ★Theory of shells. **81c:73003**
Thermomechanics ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] **81f:73001**
Trends in applications of pure mathematics to mechanics ★Trends in applications of pure mathematics to mechanics. Vol. II. **81a:73003**
Viscoelasticity ★Вопросы теории упругости и вязкоупругости. (Russian) [Problems in the theory of elasticity and viscoelasticity] **81c:73002**

secondary classifications:

(Pisarenko, G. S.) *See* **Current problems in theoretical and applied mechanics, (81b:70001)**
(Yih, Chia Shun) *See* **Advances in applied mechanics, (81a:76003)**
Advances in applied mechanics ★Advances in applied mechanics. Vol. 18. **(81a:76003)**
All-Union Congress:
Theoretical and Applied Mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**
Applied mechanics ★Advances in applied mechanics. Vol. 18. **(81a:76003)**
Current problems in theoretical and applied mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**
Kiev ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**
Mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**

73A05 Axiomatics, foundations

Hughes, Thomas J. R. *See* **Marsden, Jerrold E., 81j:73004**
Marsden, Jerrold E. (*with* Hughes, Thomas J. R.) Topics in the mathematical foundations of elasticity. **81j:73004**
Pristaro, Agostino On the general structure of continuum physics. I. Derivative spaces. (Italian summary) **81m:73012**
Woźniak, Czesław On the formation of simplified theories of solid mechanics. (Polish and Russian summaries) **81k:73003**

secondary classifications:

Capriz, G. Bodies with microstructure. I. (Italian summary) **(81k:73006)**
Georgiev, Georgi Iv. (*with* Ignat, Margareta) On the flow and current lines of some significant motions in continuum kinematics. (Italian) **(81m:53010)**
Ignat, Margareta *See* **Georgiev, Georgi Iv., (81m:53010)**

73Bxx Continuum mechanics {For fluids, see 76Axx.}

secondary classifications:

Spencer, A. J. M. ★Continuum mechanics. **(81k:73001)**

73B05 Constitutive equations

Cohen, H. *See* **Murdoch, A. I., 81d:73003**
Geroyannis, V. S. Rotational dynamics of a deformable medium: further generalization. **81k:73004**
Léné, Françoise Comportement macroscopique de matériaux élastiques comportant des inclusions rigides ou des trous répartis périodiquement. (English summary) **81e:73004**
Murdoch, A. I. (*with* Cohen, H.) Symmetry considerations for material surfaces. **81d:73003**
Nunziato, Jace W. (*with* Walsh, Edward K.) On ideal multiphase mixtures with chemical reactions and diffusion. **81e:73005**
Rajagopal, K. R. (*with* Wineman, A.) On constitutive equations for branching of response with selectivity. (French and German summaries) **81e:73006**
Rougée, P. Formulation lagrangienne intrinsèque en mécanique des milieux continus. (English summary) **81j:73005**
Samarin, Ju. P. The structure of equations for the state of real materials with rheological properties. (Russian) **81d:73004**
Walsh, Edward K. *See* **Nunziato, Jace W., 81e:73005**
Williams, William O. A formal description of representation theorems for constitutive functions. **81k:73005**
Wineman, A. *See* **Rajagopal, K. R., 81e:73006**

secondary classifications:

Guélin, P. Remarques sur l'hystérésis mécanique. Les bases d'un schéma thermomécanique à structure héréditaire. (English summary) **(81f:73002)**
Gurtin, Morton E. (*with* Williams, William O.; Suliciu, Ion) On rate-type constitutive equations and the energy of viscoelastic and viscoplastic materials. **(81d:73035)**
Holnicki-Szulc, Jan (*with* Rogula, D.) Nonlocal, continuum models of large engineering structures. (Polish and Russian summaries) **(81i:73008)**
(*with* Rogula, D.) Boundary problems in nonlocal continuum models of large engineering structures. (Polish and Russian summaries) **(81j:73058)**
König, Jan A. On the incremental collapse criterion accounting for temperature dependence of yield point stress. (Polish and Russian summaries) **(81k:73023)**
Naerlović-Veljković, Natalija *See* **Plavšić, M., (81j:73006)**
Plavšić, M. (*with* Naerlović-Veljković, Natalija) Thermodiffusion in dipolar elastic materials. **(81j:73006)**
Pristaro, Agostino On the general structure of continuum physics. I. Derivative spaces. (Italian summary) **(81m:73012)**
Rogula, D. *See* **Holnicki-Szulc, Jan, (81i:73008)** *and* **Holnicki-Szulc, Jan, (81j:73058)**
Suliciu, Ion *See* **Gurtin, Morton E.; et al., (81d:73035)**
Sztyren, Malgorzata Boundary-value problems and surface forces for integral models of nonlocal elastic bodies. (Russian summary) **(81m:73026)**
Williams, William O. *See* **Gurtin, Morton E.; et al., (81d:73035)**

73B10 Isotropic functionals

Sidoroff, François Sur l'équation tensorielle $AX + XA = H$. (English summary) **81e:73007**

73B15 Rotational groups [See also 22Exx.]

secondary classifications:

Oğuztöreli, Mehmet Namık (*with* Şuhubi, E. S.; Teymur, M.) An initial value problem in the theory of nonlinear wave propagation. **(81g:35080)**
Şuhubi, E. S. *See* **Oğuztöreli, Mehmet Namık; et al., (81g:35080)**
Teymur, M. *See* **Oğuztöreli, Mehmet Namık; et al., (81g:35080)**

73B20 Simple materials

73B25 Multipolar stress theory

Capriz, G. Bodies with microstructure. I. (Italian summary) **81k:73006**
Chakrabarti, Jayasree *See* **Sengupta, Pran Ranjan, 81h:73002a** *and* **Sengupta, Pran Ranjan, 81h:73002b**
Ghosh, Bhabani Charan Solutions of the problem of vertical load distributed sinusoidally on the horizontal surface of a semi-infinite micropolar solid. (Russian summary) **81k:73007**
Kondo, Kazuo Constitutional restriction on micromultipolar disturbances. (Japanese summary) **81m:73013**
Naerlović-Veljković, Natalija *See* **Plavšić, M., 81j:73006**
Paria, Gunadhar Plane strain in Cosserat elasticity with hypothesis of displacement dependent rotation. **81b:73003**
Plavšić, M. (*with* Naerlović-Veljković, Natalija) Thermodiffusion in dipolar elastic materials. **81j:73006**
Sengupta, Pran Ranjan (*with* Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. I. Lamb's problem—line load suddenly applied on a micropolar elastic half-space. I. (Russian summary) **81h:73002a**
(*with* Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. I. Lamb's problem—line load suddenly applied on micropolar elastic half-space. II. (Russian summary) **81h:73002b**
Wilkes, N. S. On the stability of multipolar elastic materials. **81a:73004**
Zanfir, Ştefan Un théorème d'unicité de la solution dans la théorie linéaire de l'élasticité des corps dipolaires, cas dynamiques. **81b:73004**

73B30 Thermodynamics of solids [See also 73U05; for gases and fluids, see 80–XX.]

Borş, Constantin I. Sur la thermodynamique des milieux continus non locaux. (English summary) **81e:73008**
Coleman, Bernard D. (*with* Owen, David R.) On the thermodynamics of elastic-plastic materials with temperature-dependent moduli and yield stresses. **81i:73002**
Epstein, M. (*with* Glockner, P. G.) On nonisothermal rigid shell theory. (German and Russian summaries) **81h:73003**
Glockner, P. G. *See* **Epstein, M., 81h:73003**
Green, A. E. (*with* Naghdi, P. M.) On thermodynamic restrictions in the theory of elastic-plastic materials. **81j:73007**
Guélin, P. Remarques sur l'hystérésis mécanique. Les bases d'un schéma thermomécanique à structure héréditaire. (English summary) **81f:73002**
Kamenjarž, Ja. A. (*with* Sedov, L. I.) Construction of new continuum models. (Russian) **81j:73008**
Karnaukhov, V. G. (*with* Senčenkov, I. K.) Thermodynamic theory of continua of a differential type with internal variables. (Russian) **81g:73001**
Naghdi, P. M. *See* **Green, A. E., 81j:73007**
Owen, David R. *See* **Coleman, Bernard D., 81i:73002**
Paglietti, A. On the thermodynamic behaviour of nonhyperelastic elastic materials. (Polish and Russian summaries) **81g:73002**
Sedov, L. I. *See* **Kamenjarž, Ja. A., 81j:73008**
Senčenkov, I. K. *See* **Karnaukhov, V. G., 81g:73001**
Trzęsowski, Andrzej The size effect. I. Thermodynamical model. (Russian summary) **81h:73004a**
The size effect. II. Model of dynamics. (Russian summary) **81h:73004b**

secondary classifications:

Bedford, Anthony *See* **Drumheller, Douglas S., (81f:76047)**
Boulanger, Ph. *See* **Mayne, G., (81e:73043)**
Drumheller, Douglas S. (*with* Bedford, Anthony) A thermomechanical theory for reacting immiscible mixtures. **(81f:76047)**
Ericksen, J. L. Some phase transitions in crystals. **(81b:82003)**
Jacquez, John A. Compartmental models of biological systems: linear and nonlinear. (*See* **80d:00003**)
Lubliner, J. On thermodynamic yield criteria. (German summary) **(81g:73037)**
Mayne, G. (*with* Boulanger, Ph.) Modèles intégro-différentiels isotropes en viscoélasticité linéaire. (English and German summaries) **(81e:73043)**
Morro, A. Wave propagation in thermoviscous materials with hidden variables. (Polish and Russian summaries) **(81g:73123)**
Naerlović-Veljković, Natalija *See* **Plavšić, M., (81j:73006)**
Plavšić, M. (*with* Naerlović-Veljković, Natalija) Thermodiffusion in dipolar elastic materials. **(81j:73006)**
Rougée, P. Formulation lagrangienne intrinsèque en mécanique des milieux continus. (English summary) **(81j:73005)**
Tokuoka, T. Thermodynamical deduction of constitutive equations of a plastic material with combined work-hardening. (German summary) **(81g:73048)**

73B35 Random materials

Devaney, A. J. Multiple scattering theory for discrete, elastic, random media. **81j:73009**
Hudson, John Arthur Overall properties of a cracked solid. **81j:73010**
Kröner, E. Effective properties of random elastic media. (Polish and Russian summaries) **81e:73009**

secondary classifications:

Hudson, John Arthur Overall properties of a cracked solid. **(81j:73010)**
Litwiniszyn, Jerzy On some interpretation of the discontinuity of displacements in a loose medium. (Russian summary) **(81f:73051)**
Papanicolaou, George C. Effective parameters and fluctuations for boundary value problems. **(81g:35119)**
Sanchez-Hubert, Jacqueline Étude de certaines équations intégrodifférentielles issues de la théorie de l'homogénéisation. (Italian summary) **(81k:45017)**

73B99 None of the above, but in this section

Alfantis, Elias C. (*with* Beskos, D. E.) A mathematical model for diffusion in a screw dislocation field. **81j:73011**
Babakov, A. V. (*with* Severinov, L. I.) A conservative numerical method of "flows" for the solution of problems in continuum mechanics. (Russian) (*See* **81g:76084**)
Berezin, V. T. Nonequilibrium relativistic strain tensor and relativistic rigid disk rotation. (Russian. English summary) **81m:73014**
Beskos, D. E. *See* **Alfantis, Elias C., 81j:73011**
Bretteville, Jacques *See* **Mauss, Jacques, 81d:73005**
Cowin, S. C. (*with* Leslie, F. M.) On kinetic energy and momenta in Cosserat continua. (German summary) **81f:73003**
Golebiewska Herrmann, Alicia On conservation laws of continuum mechanics. **81k:73008**
Grioli, Giuseppe Analytic questions regarding Cosserat continua. (Italian) **81j:73012**
Horošun, L. P. Generalized theory of elastic mixtures. **81m:73015**
(Konjaeva, M.) *See* **Rabotnov, Ju. N., 81a:73007**
Kopisz, Małgorzata On Cosserat continua in Euclidean and Galilean space-time. (Russian and French summaries) **81g:73003**
Leslie, F. M. *See* **Cowin, S. C., 81f:73003**
Mânzatu, Eufrosina Study of a thermodynamic system by seminormed topologies. (*See* **81j:93006a**)
Mauss, Jacques (*with* Bretteville, Jacques) Dérivation et intégration objectives régulières. (English summary) **81d:73005**
Minagawa, S. A non-Riemannian geometrical theory of imperfections in a Cosserat continuum. (Polish and Russian summaries) **81j:73013**
Müller, Ingo Stress and heat flux in a dumbbell solution. (Polish and Russian summaries) **81a:73005**
Nikolaevskiĭ, V. N. Volume averaging as a method of constructing mathematical models of media with internal structure. (Russian. Armenian and English summaries) **81a:73006**
Rabotnov, Ju. N. ★Elements of hereditary solid mechanics. **81a:73007**
Severinov, L. I. *See* **Babakov, A. V., (*See* 81g:76084)**
Stazi, Luigi On the instrinsic formulation of hyperelastic continua. (Italian. English summary) **81j:73014**
Sztyren, Małgorzata Boundary value problems and surface forces for integro-differential models of nonlocal elastic bodies. (Russian summary) **81j:73015**

secondary classifications:

Germain, Paul (*with* Muller, Patrick) ★Introduction à la mécanique des milieux continus. (French) [Introduction to the mechanics of continuous media] **(81m:73001)**
Lions, Jacques-Louis Introductory remarks on asymptotic analysis of periodic structures. **(81j:35022)**
Mimura, Fumitake *See* **Nôno, Takayuki, (81g:58033)**
Muller, Patrick *See* **Germain, Paul, (81m:73001)**
Nôno, Takayuki (*with* Mimura, Fumitake) Material symmetries. I. **(81g:58033)**
Stazi, Luigi On the relativistic kinematics of the deformations of a three-dimensional continuum. (Italian. English summary) **(81d:83009)**
Wheeler, Robert L. Asymptotic behavior of solutions of linear Volterra integro-differential equations in Hilbert space. **(81d:45018)**
Woźniak, Czesław Nonstandard analysis and its application to mechanics. **(81e:03065)**

73Cxx Elasticity {For the biharmonic equation, see 31A30, 31B30; for acoustics, see 76Q05.}

73C02 Classical linear elasticity

Hünlich, Rolf (*with* Naumann, Joachim) On general boundary value problems and duality in linear elasticity. II. (Czech and Russian summaries) **81g:73004**
Kiričenko, A. M. *See* **Podil'čuk, Ju. N., 81k:73009**
Naumann, Joachim *See* **Hünlich, Rolf, 81g:73004**
Nemiš, Ju. M. Three-dimensional boundary value problems of the theory of elasticity for noncanonical regions. **81m:73016**
Podil'čuk, Ju. N. (*with* Kiričenko, A. M.) Solution of some boundary value problems of elasticity theory for a hyperboloid of revolution of one sheet. (Russian. English summary) **81k:73009**
Teodorescu, P. P. Sur quelques problèmes bidimensionnels de la théorie de l'élasticité. **81k:73010**
Vencel', È. S. Solution of certain linear boundary value problems of the theory of elasticity with a complex operator by means of simple boundary value problems. (Russian. English summary) **81h:73005**

secondary classifications:

Cimetière, Alain Un problème de flambement unilatéral en théorie des plaques. (English summary) **(81k:73037)**
Dickey, R. W. Stability of periodic solutions of the nonlinear string. **(81m:70030)**
Sprössig, Wolfgang Anwendung der analytischen Theorie der Quaternionen zur Lösung räumlicher Probleme der linearen Elastizität in beschränkten Gebieten. **(81h:73007)**

73C03 Complex variable techniques

Bortnikova, A. S. *See* **Libackiĭ, L. L., 81j:73016**

Čigarev, V. N. Solution of the first fundamental problem of elasticity theory for an infinite strip with several semi-infinite slits. **81f:73004**

Libackiĭ, L. L. (*with* Bortnikova, A. S.) Reduction of a problem on the elastic equilibrium of a disc with arc cuts to an integral equation. (Russian) **81j:73016**

secondary classifications:

Babeiko, M. E. *See* **Ševčenko, Ju. M.; et al., (81h:73058)**

Baiseleĭšvili, M. O. (*with* Natroĭvili, D. G.) Dynamical problems of the theory of elasticity for homogeneous anisotropic media. (Russian. Georgian and English summaries) **(81k:73012)**

Natroĭvili, D. G. *See* **Baiseleĭšvili, M. O., (81k:73012)**

Piskun, V. V. *See* **Ševčenko, Ju. M.; et al., (81h:73058)**

Savčenko, V. G. *See* **Ševčenko, Ju. M.; et al., (81h:73058)**

Savenkov, V. A. A mixed problem of elasticity theory for an anisotropic plane with cuts on the real axis. (Russian) **(81m:73022)**

Ševčenko, Ju. M. (*with* Babeĭko, M. E.; Piskun, V. V.; Savčenko, V. G.) ★Пространственные задачи термо-пластичности. (Russian) [Three-dimensional problems of thermoplasticity] **(81h:73058)**

73C05 Stress functions

Arianyh, I. S. Representation of functions of stresses of the plane theory of elasticity by harmonic functions. (Russian) **81g:73005**

Bressan, Sergio Characteristic conditions for the stress components in a convex body. (Italian) **81f:73005**

Fujita, Teruaki (*with* Tsuchida, Eiichiro; Nakahara, Ichiro) Stress concentration due to a hemiprolate spheroidal pit at a free surface of a semi-infinite body under all-around tension. **81g:73006**

Gregory, R. D. The semi-infinite strip $x > 0$, $-1 \leqslant y \leqslant 1$; the Papkovich-Fadle eigenfunctions when $\varphi_{xx}(0,y)$, $\varphi_{yy}(0,y)$ are prescribed. **81e:73010**

Guz', O. M. (*with* Kolman, V. P.) A nonstationary problem of the theory of elasticity for an incompressible half-plane with initial stresses. (Russian. English summary) **81i:73003**

Holmatov, T. Methods for solving problems in stresses. (Russian) **81h:73006**

Ingraffea, Anthony R. (*with* Manu, Corneliu) Stress-intensity factor computation in three dimensions with quarter-point elements. **81m:73017**

Kawakami, Takashi (*with* Nakahara, Ichiro; Tsuchida, Eiichiro; Matsumoto, Hiroyuki) Stresses in a circular cylinder having an eccentric spherical cavity under tension. **81d:73006**

Keer, L. M. *See* **Luk, V. K., 81e:73011**

Kolman, V. P. *See* **Guz', O. M., 81i:73003**

Luk, V. K. (*with* Keer, L. M.) Stress analysis of a deep rigid axially-loaded cylindrical anchor in an elastic medium. **81e:73011**

Manu, Corneliu *See* **Ingraffea, Anthony R., 81m:73017**

Matsumoto, Hiroyuki *See* **Kawakami, Takashi; et al., 81d:73006**

Mișicu, M. n-harmonic solutions of the anti-median elastic problem. **81d:73007**

Nakahara, Ichiro *See* **Kawakami, Takashi; et al., 81d:73006** *and* **Fujita, Teruaki; et al., 81g:73006**

Pavlov, P. K. The stressed state of an elastic circular ring with a press-fitted washer under the action of concentrated power factors. (Bulgarian. Russian and English summaries) **81g:73007**

Rieder, G. On Maxwell's, Klein's and Wieghardt's stress functions for discontinuous media. (Polish and Russian summaries) **81c:73005**

Theocaris, P. S. *See* **Tsamasphyros, G. J., 81c:73006**

Tsamasphyros, G. J. (*with* Theocaris, P. S.) On the solution of the sector problem. (French summary) **81c:73006**

Tsuchida, Eiichiro *See* **Kawakami, Takashi; et al., 81d:73006** *and* **Fujita, Teruaki; et al., 81g:73006**

Utsugi, Satoshi *See* **Yoshino, Toshio, 81j:73017**

Yoshino, Toshio (*with* Utsugi, Satoshi) Three-dimensional analysis of a finite hollow cylinder subjected to axiasymmetric deformations. **81j:73017**

secondary classifications:

Šahurdin, V. I. *See* **Zimin, V. D., (81g:78004)**

Sperb, René P. Maximum principles and nonlinear elliptic problems. **(81f:35044)**

Zimin, V. D. (*with* Šahurdin, V. I.) Method of calculating stresses by the results through translucence of three-dimensional birefractive models. (Russian) **(81g:78004)**

73C10 Saint-Venant's principle

Fichera, Gaetano Remarks on Saint-Venant's principle. (Italian summary) **81e:73012**

secondary classifications:

Georgescu, Vladimir On the operator of symmetric differentiation on a compact Riemannian manifold with boundary. **(81m:58002)**

73C15 Uniqueness theorems

Pobedrja, B. E. A new formulation of the problem of the mechanics of a deformable solid in stresses. (Russian) **81m:73018**

secondary classifications:

Hayes, M. The Dirichlet problem for elastic cubic crystals. **(81e:73013)**

Spector, Scott J. On uniqueness in finite elasticity with general loading. (French summary) **(81g:73059)**

73C20 Strain energy methods

Hlaváček, Ivan (*with* Lovíšek, Ján) Finite element analysis of the Signorini problem in semicoercive cases. (Czech summary) **81k:73011**

Lovíšek, Ján *See* **Hlaváček, Ivan, 81k:73011**

secondary classifications:

Gurtin, Morton E. On patched variational principles in elasticity. **(81j:73024)**

Kikuchi, Noboru Beam bending problems on a Pasternak foundation using reciprocal variational inequalities. **(81h:73052)**

73C25 Thermal stress problems

Nowacki, Witold Thermal stresses in anisotropic bodies. (*See* **80e:73072**)

Sprössig, Wolfgang Anwendung der analytischen Theorie der Quaternionen zur Lösung räumlicher Probleme der linearen Elastizität in beschränkten Gebieten. **81h:73007**

Val'kovskaja, V. I. Quasistatic oscillations of a circular plate in a stochastic temperature field. (Russian) **81m:73019**

secondary classifications:

Jentsch, Lothar Zur Theorie der Wärmespannungen in Bimetallkörpern. **(81h:73057)**

73C30 Anisotropic bodies

Baiseleĭšvili, M. O. (*with* Natroĭvili, D. G.) Dynamical problems of the theory of elasticity for homogeneous anisotropic media. (Russian. Georgian and English summaries) **81k:73012**

Cohen, Gerald A. Comment on: "Note on the effect of transverse shear deformation in laminated anisotropic plates" by E. Reissner. **81j:73018b**

Dahan, Marc (*with* Predeleanu, M.) Solutions fondamentales pour un milieu élastique à isotropie transverse. (English summary) **81f:73006**

Hačatrjan, A. A. The variational principle in elasticity theory with varying modulus. (Russian. Armenian summary) **81g:73008**

Hayes, M. The Dirichlet problem for elastic cubic crystals. **81e:73013**

Mihailov, S. E. Stress singularity in a compound arbitrarily anisotropic body, and applications to composites. **81g:73009**

Natroĭvili, D. G. Fundamental matrices of equations of steady oscillations and pseudo-oscillations of the anisotropic theory of elasticity. (Russian. Georgian and English summaries) **81d:73008**

The principle of limit absorption in the anisotropic theory of elasticity. (Russian. Georgian and English summaries) **81e:73014**

See also **Baiseleĭšvili, M. O., 81k:73012**

Parry, Gareth P. On the finite plane strain of anisotropic compressible hyperelastic materials. **81a:73008**

Peleh, B. L. *See* **Vasil'čenko, I. P., 81a:73009**

Predeleanu, M. *See* **Dahan, Marc, 81f:73006**

Reissner, Eric Note on the effect of transverse shear deformation in laminated anisotropic plates. **81j:73018a**

See also **Cohen, Gerald A., 81j:73018b**

Stranghan, Brian Consequences of analyticity in linear elastostatics and related systems. **81h:73005**

Vasil'čenko, I. P. (*with* Peleh, B. L.) ★Основы электромагнитного метода исследования напряжений в анизотропных средах. (Russian) [Foundations of the electromagnetic method of studying stresses in anisotropic media] **81a:73009**

Veselovs'ka, O. O. Solution of a boundary value problem on torsion of an anisotropic rod. (Russian) **81h:73008**

secondary classifications:

Betten, J. Über die Konvexität von Fließkörpern isotroper und anisotroper Stoffe. (English summary) **(81d:73033)**

Brusnikin, V. N. Determination of the critical load in computing the strength of plates. (Russian) **(81h:73031)**

Every, A. G. General closed-form expressions for acoustic waves in elastically anisotropic solids. **(81g:73035)**

Heise, Herbert (*with* Palazotto, Anthony N.) Elastic-plastic anisotropic materials. **(81m:73036)**

Holm, P. (*with* Lothe, J.) The topological nature of the polarization field for body waves in anisotropic elastic media. **(81g:73023)**

Hughes, Thomas J. R. Generalization of selective integration procedures to anisotropic and nonlinear media. **(81g:65154)**

Lothe, J. *See* **Holm, P., (81g:73023)**

Nowinski, J. L. Bilateral bounds for the solution of a generalized biharmonic boundary value problem. **(81j:73061)**

Palazotto, Anthony N. *See* **Heise, Herbert, (81m:73036)**

Parry, Gareth P. On the relative strengths of stability criteria in anisotropic materials. **(81e:73050)**

Romenskiĭ, E. I. Distribution of small deformations in a plastic medium and sliding lines. (Russian) **(81h:73021)**

73C35 Mixed boundary value problems [See also 45F05.]

Aleksandrov, V. M. (*with* Kovalenko, E. V.) A class of integral equations of mixed problems of continuum mechanics. (Russian) **81k:73013**

Altiero, Nicholas J. (*with* Gavazza, Steven D.) On a unified boundary-integral equation method. (French summary) **81a:73010**

Aminov, A. Modular analysis of computational algorithms of the stress method. (Russian) **81e:73015**

Azarbin, A. M. An iteration method for calculating bodies with nonlinearly elastic

connections. (Russian) **81e:73016**

Bežanišvili, Ju. A. Solution of the fundamental three-dimensional dynamical problem of elasticity theory with mixed boundary conditions. (Russian) **81c:73007**

Deleĭ, V. Ĭ. Cauchy problems for a system of equations of the dynamic theory of elasticity. (Russian) **81f:73007**

Gavazza, Steven D. *See* **Altiero, Nicholas J., 81a:73010**

Hara, Toshiaki (*with* Shibuya, Toshikazu; Koizumi, Takashi; Nakahara, Ichiro) An asymmetric mixed boundary value problem of the elastic half-space under shear by an annular rigid punch. **81g:73010**

Heise, U. Systematic compilation of integral equations of the Rizzo type of Kupradze's functional equations for boundary value problems of plane elasticity. (German summary) **81a:73011**

Kamyševa, G. A. (*with* Nuller, B. M.) A class of mixed periodic problems of elasticity theory solvable in quadratures. (Russian) **81f:73008**

Kavlakan, M. V. (*with* Mihaĭlov, A. M.) Solution of a mixed static problem of the elasticity theory for the half-space on an elastic base. (Russian) **81m:73020**

Koizumi, Takashi *See* **Hara, Toshiaki; et al., 81g:73010**

Kovalenko, E. V. *See* **Aleksandrov, V. M., 81k:73013**

Kupradze, V. D. On dynamic and related problems of elasticity. **81e:73017**

Mihaĭlov, A. M. *See* **Kavlakan, M. V., 81m:73020**

Nakahara, Ichiro *See* **Hara, Toshiaki; et al., 81g:73010**

Nuller, B. M. *See* **Kamyševa, G. A., 81f:73008**

Patra, Baidyanath On the torsion of a finite elastic cone as a mixed boundary value problem. **81m:73021**

Pavlov, P. K. A problem of two-dimensional elasticity theory with mixed boundary conditions specified on cut along an arc of a circle. (Bulgarian. Russian and English summaries) **81g:73011**

Savenkov, V. A. A mixed problem of elasticity theory for an anisotropic plane with cuts on the real axis. (Russian) **81m:73022**

Shibuya, Toshikazu *See* **Hara, Toshiaki; et al., 81g:73010**

Ufljand, Ja. S. Solution of some mixed problems on the torsion of elastic bodies, using a finite transformation of the Mehler-Fock type. **81d:73009**

Valedinskiĭ, V. D. Numerical solution of a problem of the theory of elasticity on the contact of compressible and incompressible media. (Russian) **81j:73019**

secondary classifications:

Borodaĭ, G. P. *See* **Rvačov, V. L., (81c:73008)**

Chadwick, Paul (*with* Jarvis, D. A.) Interfacial waves in a pre-strained neo-Hookean body. I. Biaxial states of strain. **(81g:73026a)**

(*with* Jarvis, D. A.) Interfacial waves in a pre-strained neo-Hookean body. II. Triaxial states of strain. **(81g:73026b)**

Chou, S. I. (*with* Wang, Chao Chen) Error estimates of finite element approximations for problems in linear elasticity. I. Problems in elastostatics. **(81j:73065a)**

(*with* Wang, Chao Chen) Error estimates in finite element approximations for problems in linear elasticity. II. Problems in elastodynamics; continuous time approximations. **(81j:73065b)**

Choudhary, Arati *See* **Srivastava, K. N.; et al., (81m:73072)**

Guzenda, Tadeusz Thermal stresses in physically nonlinear discs. I. Displacement equations. (Polish. Russian and English summaries) **(81f:73055a)**

Thermal stresses in physically nonlinear discs. II. Variational principles. (Polish. Russian and English summaries) **(81f:73055b)**

Hussain, M. A. (*with* Pu, S. L.) Exact solution of coupled pairs of dual trigonometric series. **(81b:45007)**

Jarvis, D. A. *See* **Chadwick, Paul, (81g:73026a)** *and* **Chadwick, Paul, (81g:73026b)**

Palaiya, R. M. *See* **Srivastava, K. N.; et al., (81m:73072)**

Procenko, V. S. Bending of a system of strip plates lying on an elastic half-space. **(81h:73053)**

Pu, S. L. *See* **Hussain, M. A., (81b:45007)**

Rvačov, V. L. (*with* Borodaĭ, G. P.) Approximate solution of three-dimensional problems of elasticity theory for piecewise homogeneous bodies by the method of *R*-functions. (Russian) **(81c:73008)**

(Ševljakov, Ju. A.) *See* **Interaction in the mechanics of constructions, (81m:73007)**

Srivastava, K. N. (*with* Palaiya, R. M.; Choudhary, Arati) On a Griffith crack at the interface of two bonded dissimilar elastic wedges. **(81m:73072)**

Wang, Chao Chen *See* **Chou, S. I., (81j:73065a)** *and* **Chou, S. I., (81j:73065b)**

Zevin, A. A. Optimum shape of an aging hereditary solid. **(81c:73030)**

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Mechanics ★Взаимодействие в механике конструкций. (Russian) [Interaction in the mechanics of constructions] **(81m:73007)**

73C40 Nonhomogeneous bodies and inclusions

Avazašvili, N. D. On the solution of fundamental plane static problems of elasticity theory for some inhomogeneous bodies. (Russian. Georgian and English summaries) **81b:73006**

Bhargava, R. D. (*with* Puranik, S. S.) Torsion problem for elastic cylinder with inserts and holes. **81g:73012**

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Caillerie, Denis The effect of a thin inclusion of high rigidity in an elastic body. **81e:73018**

Evtušenko, A. A. *See* **Grilic'kiĭ, D. V.; et al., 81j:73020**

Grilic'kiĭ, D. V. (*with* Evtušenko, A. A.; Sulim, G. T.) A half-plane with a linear elastic inclusion of arbitrary orientation. (Russian. Armenian and English summaries) **81j:73020**

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Michel, Bernd Point defects and inclusions near solid surfaces and interfaces. (Polish and Russian summaries) **81g:73013**

Moss, R. L. (*with* Rogers, T. G.; Spencer, A. J. M.) Axially symmetric deformations of fibre-reinforced cylinders. **81k:73014**

Mustafaev, Dž. M. Elastic equilibrium of a ring coupled with a plane of another material. (Russian. Azerbaijani and English summaries) **81k:73015**

Nakahara, Ichiro *See* **Tsuchida, Eiichiro; et al., 81g:73014**

Nuller, B. M. (*with* Spesivceva, L. F.) On a class of problems for elastic regions weakened by an inhomogeneous inclusion. **81d:73010**

Puranik, S. S. *See* **Bhargava, R. D., 81g:73012**

Rogers, T. G. *See* **Moss, R. L.; et al., 81k:73014**

Rvačov, V. L. (*with* Borodaĭ, G. P.) Approximate solution of three-dimensional problems of elasticity theory for piecewise homogeneous bodies by the method of *R*-functions. (Russian) **81c:73008**

Šindžikašvili, O. N. The effect of inhomogeneity of material on the order of singularity of elastic solutions in the neighborhood of a vertex of angles. (Russian) **81a:73012**

Spencer, A. J. M. *See* **Moss, R. L.; et al., 81k:73014**

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Sulim, G. T. *See* **Grilic'kiĭ, D. V.; et al., 81j:73020**

Tsuchida, Eiichiro (*with* Nakahara, Ichiro; Kodama, Masao) On the asymmetric problem of elasticity theory for an infinite elastic solid containing two spherical inclusions. **81g:73014**

Zahalak, George Ireneus Plane harmonic functions in the presence of a surface layer of arbitrary stiffness. **81c:73009**

secondary classifications:

Araki, Hidekazu (*with* Shioya, Shunsuke; Matsuda, Mitsumasa) On the thermal stresses of an infinite plate with an infinite row of circular inclusions under uniform heat flow. **(81f:73052)**

Caillerie, Denis Thin inclusion of high rigidity in an elastic body. (*See* **81j:76001**)

Dhaliwal, Ranjit S. *See* **Singh, Brij M.; et al., (81j:73076)**

Horošun, L. P. Generalized theory of elastic mixtures. **(81m:73015)**

Keer, L. M. *See* **Luk, V. K., (81e:73011)**

Luk, V. K. (*with* Keer, L. M.) Stress analysis of a deep rigid axially-loaded cylindrical anchor in an elastic medium. **(81e:73011)**

Maceri, Aldo *See* **Toscano, Raffaele,** (*See* **81j:68009**) *and* **Toscano, Raffaele,** (*See* **81j:68009**)

Matsuda, Mitsumasa *See* **Araki, Hidekazu; et al., (81f:73052)**

Reissner, Eric On the influence of a rigid circular inclusion on the twisting and shearing of a shallow spherical shell. **(81g:73100)**

Rokne, Jon *See* **Singh, Brij M.; et al., (81j:73076)**

Shioya, Shunsuke *See* **Araki, Hidekazu; et al., (81f:73052)**

Singh, Brij M. (*with* Dhaliwal, Ranjit S.; Rokne, Jon) An axisymmetric external crack problem for an infinite medium with a cylindrical inclusion. **(81j:73076)**

Toscano, Raffaele (*with* Maceri, Aldo) Preliminary results on the elastic stability of beams under unilateral constraints. (*See* **81j:68009**)

(*with* Maceri, Aldo) Preliminary results on the problem of the plate on unilateral elastic boundary support. (*See* **81j:68009**)

Willis, J. R. A polarization approach to the scattering of elastic waves. I. Scattering by a single inclusion. **(81k:73019a)**

A polarization approach to the scattering of elastic waves. II. Multiple scattering from inclusions. **(81k:73019b)**

73C45 Stress concentrations

Gogija, A. A. ★Численное решение задачи о концентрации напряжений около прямоугольного отверстия в прямоугольных пластинках. (Russian) [Numerical solution of a problem about concentration of stresses around a rectangular aperture in rectangular plates] **81m:73023**

Lal, Mange (*with* Pande, D.) Study of second-order elastic effects in an elliptic hole stressed at infinity. **81d:73011**

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Kuršin, L. M. (*with* Rastorguev, G. I.) Reinforcement of the contour of a hole in a plate. **(81g:73091)**

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el-Sirafy, Ibrahim H. On the problem of stretched infinite plate weakened by a hole having arbitrary shape. **(81b:73029)**

73C50 Nonlinear elasticity

Antman, Stuart S. (*with* Brézis, Haïm) The existence of orientation-preserving deformations in nonlinear elasticity. **81h:73009**

Aron, M. A nonexistence result in nonlinear hyperelastostatics. **81d:73012**

Aubert, Gilles (*with* Tahraoui, Rabah) Sur la faible fermeture de certains ensembles de contrainte en élasticité non linéaire plane. (English summary) **81d:73013**

Benveniste, Y. Some dynamic problems of incompressible elastic materials with different moduli in tension and compression. (German summary) **81d:73014**

Beyer, Klaus Zur ersten Randwertaufgabe in der nichtlinearen Elastizitätstheorie. **81c:73010**

Breuer, Shlomo (*with* Roseman, Joseph J.) A bound on the strain energy for the traction problem in finite elasticity with localized nonzero surface data. (German summary) **81a:73013**

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Chadwick, Paul Aspects of the dynamics of a rubberlike material. (Polish) (*See* **81f:73001**)

Thermomechanics of rubberlike materials. (Polish) (*See* **81f:73001**)

Cimetière, Alain Flambement unilatéral d'une plaque reposant sans frottement sur un support élastique tridimensionnel. (English summary) **81e:73019**

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elastic material of harmonic type. (Russian) **81c:73011**

Engelbrecht, J. Corrected nonlinear equations for deformation wave processes. **81d:73015**

Ericksen, J. L. On St.-Venant's problem for thin-walled tubes. **81d:73016**

Grinfel'd, M. A. On the nonlinear theory of the head wave. (Russian) **81f:73009**

Gurvič, E. L. Complementary inequalities of the theory of elasticity. (Russian) **81f:73010**

Haughton, D. M. (*with* Ogden, R. W.) Bifurcation of inflated circular cylinders of elastic material under axial loading. I. Membrane theory for thin-walled tubes. **81b:73007a**

(*with* Ogden, R. W.) Bifurcation of inflated circular cylinders of elastic material under axial loading. II. Exact theory for thick-walled tubes. **81b:73007b**

(*with* Ogden, R. W.) Bifurcation of finitely deformed rotating elastic cylinders. **81k:73016**

Ibragimov, V. A. On a representation of solutions of the antiplane deformation problem of a physically nonlinear elastic medium. **81j:73021**

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Lur'e, A. I. Ellipticity criterion for the equations of equilibrium in nonlinear theory of elasticity. **81d:73017**

Malkus, David S. Finite elements with penalties in nonlinear elasticity. **81m:73024**

Masiov, B. P. Macroscopic variables in the nonlinear theory of elasticity of stochastically inhomogeneous incompressible bodies. (Russian. English summary) **81j:73022**

Matthies, Hermann *See* **Strang, Gilbert, 81k:73017**

Oden, J. Tinsley Existence theorems and approximations in nonlinear elasticity. **81e:73020**

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Shukla, Ram Kumar (*with* Lakshminarayana, G.) Bending of a compressible circular block into a spherical shell. (Romanian summary) **81b:73008**

Strang, Gilbert (*with* Matthies, Hermann) Numerical computations in nonlinear mechanics. **81k:73017**

Tahraoui, Rabah *See* **Aubert, Gilles, 81d:73013**

Tartar, Luc Homogénéisation et compacité par compensation. **81c:73012**

Zubov, L. M. Universal quasistatic deformations for incompressible isotropic solids with memory. **81c:73013**

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Ciarlet, Philippe G. Derivation of nonlinear plate models from three-dimensional elasticity. **(81j:73047)**

Gurtin, Morton E. On uniqueness in finite elasticity. **(81d:73044)**

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(Knops, R. J.) *See* **Nonlinear analysis and mechanics: Heriot-Watt Symposium, (81i:73001)**

Magnus, Robert (*with* Poston, Tim) Infinite dimensions and the fold catastrophe. **(81h:58018)**

Murat, François Compacité par compensation. **(81f:49036)**

Osmolovskiĭ, V. G. Korn's inequality for the geometrically nonlinear elasticity theory. (Russian) **(81g:35023)**

Parker, D. F. An asymptotic analysis of large deflections and rotations of elastic rods. **(81g:73071)**

Pica, A. (*with* Wood, R. D.; Hinton, E.) Finite element analysis of geometrically nonlinear plate behaviour using a Mindlin formulation. **(81b:73037)**

Pipkin, A. C. Some developments in the theory of inextensible networks. **(81m:73056)**

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Riks, E. A unified method for the computation of critical equilibrium states of nonlinear, elastic systems. **(81b:73024)**

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Nonlinear analysis and mechanics: Heriot-Watt Symposium ★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. **(81i:73001)**

Symposium:

Heriot-Watt, Nonlinear Analysis and Mechanics ★Nonlinear analysis and mechanics: Heriot-Watt Symposium. Vol. IV. **(81i:73001)**

73C60 Variational methods [See also 35J85, 35K85, 35L85, 49A29.]

73C99 None of the above, but in this section

Andrianopoulos, N. *See* **Theocaris, P. S.; et al., 81c:73015**

Antman, Stuart S. Nonlinear eigenvalue problems for the whirling of heavy elastic strings. **81d:73018**

Apostol, D. Matricial theory of holographic photoelasticity. (Romanian. English summary) **81h:73010**

Arianyh, I. S. Symmetric integral equations of two-dimensional elasticity theory. (Russian) **81g:73015**

Bagisbaev, K. N. *See* **Eržanov, Ž. S., 81a:73015**

Bhargava, R. D. (*with* Puranik, S. S.) Torsion problem for elastic cylinder with holes. **81c:73014**

Bondareva, V. F. One problem of elastic equilibrium of a thick-walled half-sphere with weight. **81g:73016**

Chiriță, Stan The Lamb problem in a nonlocal elastic half-space. (Russian summary) **81a:73014**

Day, W. A. Means and autocorrelations in elastodynamics. **81e:73021**

Destuynder, Philippe (*with* Djaoua, Mohamed) Équivalence de l'intégrale de Rice et du taux de restitution de l'énergie en mécanique de la rupture fragile. (English summary) **81j:73023**

Djaoua, Mohamed *See* **Destuynder, Philippe, 81j:73023**

Eržanov, Ž. S. (*with* Bagisbaev, K. N.) Some new methods of approximate solution of axially symmetric problems of elasticity theory. (Russian. Kazakh summary) **81a:73015**

Gorodeckiĭ, A. V. Convergence of methods of successive approximations in the case of a class of complex variable loading. (Russian. English summary) **81m:73025**

Gurtin, Morton E. On patched variational principles in elasticity. **81j:73024**

Ivanov, G. V. Construction of schemes for solving a planar dynamical problem of elasticity theory on the basis of approximation by linear polynomials. (Russian) **81e:73022**

Jentsch, Lothar Die elastostatischen Greenschen Tensoren 1. und 4. Art für den Halbraum als Grenzfälle eines Tensors für zwei aneinandergrenzende Halbräume mit verschiedenen Laméschen Moduln. (Georgian and English summaries) **81h:73011**

Kapilvli, O. O. (*with* Nogin, M. V.) The second fundamental problem for an elastic space with two cuts on the spherical surface. (Russian. English summary) **81g:73017**

Kogan, M. I. *See* **Sačenkov, A. V., 81h:73012**

Koval'čuk, P. S. Dynamical analysis of nonconservative elastic systems. (Russian) **81d:73019**

Lomakin, E. V. Uniqueness of solutions of problems in the theory of elasticity in the case of an isotropic polymodular body. **81g:73018**

Mühlhaus, H.-B. Bounds for the solutions of a class of nonselfadjoint boundary value problems. (*See* **81m:73009**)

Nogin, M. V. *See* **Kapilvli, O. O., 81g:73017**

Pobedrja, B. E. (*with* Šelenin, S. V.) On the matrix of influence. (Russian. English summary) **81b:73009**

Puranik, S. S. *See* **Bhargava, R. D., 81c:73014**

Ruisi, Vincenzo The Green function of certain systems with diffuse constraints. (Italian) **81a:73016**

Sačenkov, A. V. (*with* Kogan, M. I.) On variational equations of mixed type in elasticity theory. (Russian) **81h:73012**

Saltanov, M. V. The analytic mechanics of elastic fibers in the Euler representation. (Russian) **81g:73019**

Sburlan, S. F. Constraint strongly monotone operators. **81h:73013**

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Simkins, T. E. *See* **Wu, Julian J., (*See* 80m:73002)**

Sneddon, Ian N. Recent applications of integral transforms in the linear theory of elasticity. **81e:73023**

Stepanenko, V. M. Approximation of the solution of a problem of elasticity theory for an incompressible material. (Russian) **81e:73024**

Steven, G. P. *See* **Tran Cong, T., 81g:73021**

Sztyren, Małgorzata Boundary-value problems and surface forces for integral models of nonlocal elastic bodies. (Russian summary) **81m:73026**

Tanyi, G. E. On the critical points of the classical elastic energy functional. **81g:73020**

Theocaris, P. S. (*with* Tsamasphyros, G. J.; Andrianopoulos, N.) The problem of the infinite wedge. (German summary) **81c:73015**

Tran Cong, T. (*with* Steven, G. P.) Derivation of a two function expression for displacements in torsion-free axi-symmetric deformations, and its relations with other solutions. **81g:73021**

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Tuaev, A. A. Some physically nonlinear problems of two-dimensional elasticity theory. (Russian) (*See* **80d:00021**)

Villaggio, Piero Maximum modulus theorems for the elastic half-space. **81m:73027**

Wu, Julian J. (*with* Simkins, T. E.) A numerical comparison between two unconstrained variational formulations. (*See* **80m:73002**)

Yagoda, H. P. Centrifugally induced stresses within center-wound rolls. I. **81d:73020**

Yun, Tian Quan An integral equation method for solving the problem of torsion of rotating bodies. (Chinese. English summary) **81m:73028**

A note on the solution of a static problem of elastic bodies with fuzzy boundary conditions. (Chinese. English summary) **81m:73029**

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Agnoli, Gian Luigi On a class of hyperbolic equations with a singularity and boundary conditions of mixed type ($\partial u/\partial v - hu = 0$) of interest in continuum mechanics. (Italian) **(81k:35128)**

Apostol, D. Matricial theory in classical photoelasticity. (Romanian. English summary) **(81j:73001)**

Bežnaivili, Ju. A. Solution of the fundamental three-dimensional dynamical problem of elasticity theory with mixed boundary conditions. (Russian) **(81c:73007)**

Cabannes, Henri (*with* Haraux, Alain) Mouvements presque-périodiques d'une corde vibrante en présence d'un obstacle rectiligne. (English summary) **(81k:35084)**

Chow, Shui Nee (*with* Mallet-Paret, John) The parameterized obstacle problem. **(81j:35108)**

Dhaliwal, Ranjit S. *See* **Singh, Brij M., (81f:45011)**

Fosdick, R. L. (*with* MacSithigh, G. P.) Shearing motions and the formation of shocks in an elastic circular tube. **(81i:35106)**

Godunov, S. K. Hyperbolic equations of the nonlinear theory of elasticity. (Russian) (*See* **80f:35002**)

Haraux, Alain *See* **Cabannes, Henri, (81k:35084)**

Haug, Edward J. *See* **Song, Ji Oh, (81k:73051)**

Isanov, T. G. Extension of infinitesimal bendings of surfaces of positive curvature. (Russian) **(81i:53046)**

Komljenović, S. Noether's theorem and the isoperimetric problem in continuum mechanics. (Russian and Serbo-Croatian summaries) **(81e:49037)**

Konovalov, A. N. The fictitious regions method in problems of mathematical physics. **(81m:65161)**

Lions, Jacques-Louis Homogénéisation non locale. **(81d:35058)**

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Moreau, Jean-Jacques Duality characterization of strain tensor distributions in an arbitrary open set. **(81c:46039)**

Papi Frosali, Gloria On the stability of the Dirichlet problem for the vibrating string equation. **(81i:35157)**
Portnov, V. R. Existence theorems in the theory of flexible solids. (Russian) **(81j:49002)**
(Sedov, L. I.) *See* **Mechanics of a solid deformable body, (81j:73054)**
Senickiĭ, Ju. È. A generalized method of finite integral transformations in problems of the dynamic theory of elasticity. (Russian) **(81j:73034)**
Singh, Brij M. (*with* Dhaliwal, Ranjit S.) Triple trigonometric integral equations with an application. **(81f:45011)**
Song, Ji Oh (*with* Haug, Edward J.) Dynamic analysis of planar flexible mechanisms. **(81k:73051)**
Soulova, N. N. Methods for the solution of three-dimensional problems of the theory of elasticity for bodies with a parallelepiped form. (Russian) **(81m:73006)**
Tsvelichenko, V. Ja. The Ritz process in the construction of approximate solutions of problems of the theory of elasticity by the generalized Trefftz method. (Russian) **(81k:65127)**
Vasiliauskas, Z. The convergence in W_2^1 of the approximate variational-difference solution of the Signorini problem. (Russian. Lithuanian and English summaries) **(81g:49019)**
Yagoda, H. P. Integral formulas for wound rolls. **(81d:73067)**
Zlatin, A. N. Some theorems on expansion in homogeneous solutions for a cylinder. (Russian. Armenian and English summaries) **(81h:35003)**
Itogi Nauki i Tekniki ★Механика деформируемого твердого тела. Том 13. (Russian) [Mechanics of a solid deformable body. Vol. 13] **(81j:73054)**
Mechanics of a solid deformable body ★Механика деформируемого твердого тела. Том 13. (Russian) [Mechanics of a solid deformable body. Vol. 13] **(81j:73054)**

73Dxx Wave propagation in and vibrations of solids

73D05 Impact and explosion problems [See also 76L05.]

d'Acunto, Berardino *See* **Citrini, C., 81j:73025**
Chon, Chohn T. (*with* Weng, George J.) Impact of a finite elastic-viscoplastic bar. (French and German summaries) **81h:73014**
Citrini, C. (*with* d'Acunto, Berardino) The impact between two strings. (Italian) **81j:73025**
Ranga Rao, Melam P. (*with* Yadav, Hira Lal) Some approximate analytical solutions for blast waves in solids. **81f:73011**
Ting, T. C. T. Further study on one-dimensional shock waves in nonlinear elastic media. **81h:73010**
Weng, George J. *See* **Chon, Chohn T., 81h:73014**
Yadav, Hira Lal *See* **Ranga Rao, Melam P., 81f:73011**

secondary classifications:

Gaiduk, S. I. A mathematical discussion of a problem of mechanical shock along a rectangular elastic membrane. (Russian. English summary) **(81g:73080)**
Krickaja, S. S. (*with* Rogan, D. I.) A mathematical consideration of the problem of longitudinal impact on a rod in the presence of the Boltzmann-Volterra law. (Russian) **(81h:73025)**
Rogan, D. I. *See* **Krickaja, S. S., (81h:73025)**
Sirazetdinov, F. G. *See* **Teregulov, I. G., (81h:73046)**
Teregulov, I. G. (*with* Sirazetdinov, F. G.) A geometrically nonlinear problem of the dynamics of a plastic shallow spherical shell. (Russian) **(81h:73046)**

73D10 Integral transforms

secondary classifications:

Il'jasov, M. H. Dynamic torsion of a cone. (Russian. Azerbaijani and English summaries) **(81g:73051)**
Mazziotti, Enrico (*with* Renno, Pasquale) Wave propagation in a linear viscoelastic system in the presence of mass forces. (Italian. English summary) **(81e:73041)**
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73D15 Dilatational and shear waves

Al'šic, V. I. *See* **Ljubimov, V. N.; et al., 81g:73024**
Chatterjee, A. K. (*with* Mal, A. K.; Knopoff, L.; Hudson, John Arthur) Attenuation of elastic waves in a cracked, fluid-saturated solid. **81j:73026**
Douglas, A. S. *See* **Freund, L. B., 81d:73021**
Freund, L. B. (*with* Douglas, A. S.) Shear waves in an elastic-plastic material due to a supersonic surface step load. **81d:73021**
Gérard, Alain Champ résultant de l'incidence d'ondes *P* ou *SV* sur une sphère élastique. (English summary) **81g:73022**
Holm, P. (*with* Lothe, J.) The topological nature of the polarization field for body waves in anisotropic elastic media. **81g:73023**
Hudson, John Arthur *See* **Chatterjee, A. K.; et al., 81j:73026**
Kasiak, M. (*with* Włodarczyk, E.) Reflection of concentric spherical stress wave in elastic medium. (Polish and Russian summaries) **81k:73018**
Knopoff, L. *See* **Chatterjee, A. K.; et al., 81j:73026**
Kon-no, Akira *See* **Tanaka, Kichinosuke, 81g:73025**
Ledovskaja, E. M. *See* **Petrašen', G. I., 81d:73022**
Ljubimov, V. N. (*with* Al'šic, V. I.; Lothe, J.) Body waves and quasibody surface waves in a semi-infinite piezoelectric medium. **81g:73024**
Lothe, J. *See* **Holm, P., 81g:73023** *and* **Ljubimov, V. N.; et al., 81g:73024**
Mal, A. K. *See* **Chatterjee, A. K.; et al., 81j:73026**
Petrašen', G. I. (*with* Ledovskaja, E. M.) General theory of multiple wave fields in multilayer elastic media with plane-parallel boundaries of division. (Russian) **81d:73022**
Tanaka, Kichinosuke (*with* Kon-no, Akira) Harmonic viscoelastic waves propagating normal to the layers of laminated media. **81g:73025**
Włodarczyk, E. *See* **Kasiak, M., 81k:73018**

secondary classifications:

Barinova, T. Ja. Some sources of transverse waves in a nonideally elastic medium of the Gurevič model. (Russian) **(81a:86002)**
Chapman, C. H. Body waves in seismology. **(81a:86003)**
Gupta, A. P. (*with* Mishra, Neelam) Effect of secondary terms on axisymmetric vibration of circular plates. **(81a:73032)**
Hudson, John Arthur ★The excitation and propagation of elastic waves. **(81h:73001)**
Il'jasov, M. H. Dynamic torsion of a hollow cylinder by a load distributed along the lateral surfaces. (Russian. Azerbaijani and English summaries) **(81k:73042)**
Mei, Chiang C. Grazing incidence of short elastic waves on a slender cavity. **(81a:73018)**
Mishra, Neelam *See* **Gupta, A. P., (81a:73032)**

73D20 Surface waves

Chadwick, Paul (*with* Jarvis, D. A.) Interfacial waves in a pre-strained neo-Hookean body. I. Biaxial states of strain. **81g:73026a**
(*with* Jarvis, D. A.) Interfacial waves in a pre-strained neo-Hookean body. II. Triaxial states of strain. **81g:73026b**
García-Moliner, F. *See* **Velasco, V. R., 81g:73030**
Jarvis, D. A. *See* **Chadwick, Paul, 81g:73026a** *and* **Chadwick, Paul, 81g:73026b**
Lapin, A. D. Attenuation of a surface wave propagation along a boundary with periodic inhomogeneities. **81g:73027**
Nomofilov, V. E. Quasistationary Rayleigh waves on the surface of an inhomogeneous anisotropic elastic body. (Russian) **81a:73017**
Propagation of quasistationary Rayleigh waves in a nonuniform anisotropic elastic medium. (Russian. English summary) **81c:73016**
Pjatakov, P. A. Excitation of Love waves propagating along a cylindrical surface. **81g:73028**
Procenko, A. M. Wave propagation over a cylindrical shell. **81g:73029**
Velasco, V. R. (*with* García-Moliner, F.) Surface effects in elastic surface waves. **81g:73030**

secondary classifications:

Al'šic, V. I. *See* **Ljubimov, V. N.; et al., (81g:73024)**
Hudson, John Arthur ★The excitation and propagation of elastic waves. **(81h:73001)**
Ljubimov, V. N. (*with* Al'šic, V. I.; Lothe, J.) Body waves and quasibody surface waves in a semi-infinite piezoelectric medium. **(81g:73024)**
Lothe, J. *See* **Ljubimov, V. N.; et al., (81g:73024)**

73D25 Wave diffraction and dispersion

Boström, Anders Scattering by a smooth elastic obstacle. **81d:73023**
Codegone, M. Scattering of elastic waves through a heterogeneous medium. **81e:73025**
Eržanov, Ž. S. (*with* Žubaev, N. Ž.; Tleukenov, S. K.) On the study of cylindrical waves on a cross section with viscous friction. (Russian. Kazakh summary) **81h:73015**
Gamer, U. Die dynamische Scherbeanspruchung der Verbindung von Matrix und halbzylindrischem, starren Einschluß. **81e:73026**
Harris, John G. Diffraction by a crack of a cylindrical longitudinal pulse. (French summary) **81j:73027**
Israilov, M. S. Diffraction of an arbitrary elastic wave on a wedge. (Russian) **81j:73028**
Kovšov, A. N. Diffraction of an elastic wave by a spherical cavity. Numerical solution. **81e:73017**
Kuroyanagi, Osamu *See* **Shibahara, Masao; et al., 81g:73031**
Mei, Chiang C. Grazing incidence of short elastic waves on a slender cavity. **81a:73018**
Neerhoff, Fred L. Reciprocity and power-flow theorems for the scattering of plane elastic waves in a half space. **81d:73024**
Shibahara, Masao (*with* Tateno, Shigeaki; Kuroyanagi, Osamu) Diffraction of steady stress waves by arbitrary shaped discontinuities in elastic medium. **81g:73031**
Tateno, Shigeaki *See* **Shibahara, Masao; et al., 81g:73031**
Tleukenov, S. K. *See* **Eržanov, Ž. S.; et al., 81h:73015**
Willis, J. R. A polarization approach to the scattering of elastic waves. I. Scattering by a single inclusion. **81k:73019a**
A polarization approach to the scattering of elastic waves. II. Multiple scattering from inclusions. **81k:73019b**
Woolley, Barry Lee Backscattering from a plate with a thickness discontinuity. **81d:73025**
Žubaev, N. Ž. *See* **Eržanov, Ž. S.; et al., 81h:73015**

secondary classifications:

Achenbach, J. D. (*with* Viswanathan, K.; Norris, A.) An inversion integral for crack-scattering data. **(81a:73042)**
Devaney, A. J. Multiple scattering theory for discrete, elastic, random media. **(81j:73009)**
Dhaliwal, Ranjit S. *See* **Singh, Brij M., (81b:73050)**
Lopat'ev, A. A. (*with* Matkovskiĭ, A. P.) A study of the effect of thermoelastic scattering on the coefficient of reflection of plane harmonic waves off a plane boundary between a fluid and a solid. (Russian) **(81g:73122)**
Matkovskiĭ, A. P. *See* **Lopat'ev, A. A., (81g:73122)**
Norris, A. *See* **Achenbach, J. D.; et al., (81a:73042)**
Rokhlin, S. Diffraction of Lamb waves by a finite crack in an elastic layer. **(81a:73047)**
Singh, Brij M. (*with* Dhaliwal, Ranjit S.) Diffraction of antiplane shear waves by two cracks in the presence of a magnetic field. **(81b:73050)**
Ting, T. C. T. The effects of dispersion and dissipation on wave propagation in viscoelastic layered composites. **(81g:73054)**
Viswanathan, K. *See* **Achenbach, J. D.; et al., (81a:73042)**

73D30 Linear vibrations [See also 70Jxx.]

Awojobi, A. O. Vertical vibrations of a rigid circular body on a nonhomogeneous half-space interrupted by a frictionless plane. **81e:73018**

Bogdanov, B. A. (*with* Fridman, V. M.; Štukin, L. V.) One method of solving the problem of vibrations of an elastic solid with complex boundary conditions. **81m:73030**

Datta, Subhendu K. (*with* Kanwal, R. P.) Slow torsional oscillations of a spheroidal rigid inclusion in an elastic medium. **81b:73011**

Fridman, V. M. *See* **Iofin, L. E., 81j:73029** *and* **Bogdanov, B. A.; et al., 81m:73030**

Iofin, L. E. (*with* Fridman, V. M.) Generalization of the method of dynamic compliances and stiffnesses to the case of transient vibrations of complex elastic systems. **81j:73029**

Kanwal, R. P. *See* **Datta, Subhendu K., 81b:73011**

Katayama, K. (*with* Katayama, T.; Sekiya, T.) On the qualitative study of combination resonance in elastic systems under periodic forces. **81f:73012**

Katayama, T. *See* **Katayama, K.; et al., 81f:73012**

Kotcinik, Jaroslav ★Kmitání mechanických soustav. (Czech) [Vibration of mechanical systems] **81j:73030**

Krasnuškin, P. E. Transformations of modulated normal waves propagating along a quasilayered elastic strip. (Russian) **81a:73019**

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secondary classifications:

Boudet, René *See* **Gay, Daniel, (81j:73057)**

Gay, Daniel (*with* Boudet, René) Sur une formulation technique complète de la torsion non uniforme des poutres de sections quelconques. (English summary) **(81j:73057)**

Peiko, F. Schwingungen punktweise belasteter Systeme unter Berücksichtigung der Kopplung verschiedener Wellenarten. I. (French and English summaries) **(81k:73036)**

Sharma, B. B. On flexural vibrations of isotropic elastic circular plate according to Mindlin's theory. **(81c:73040)**

73D35 Nonlinear vibrations [See also 70Kxx.]

d'Acunto, Berardino Theorem of the energy in the elastic impact of a string in a nonlinear case. (Italian. English summary) **81j:73031**

Antman, Stuart S. The equations for large vibrations of strings. **81e:73027**

Bagdoev, A. G. (*with* Movsisjan, L. A.) On the question of flexural wave propagation in nonlinear-elastic plates. (Russian. Armenian and English summaries) **81h:73016**

Baker, John A. *See* **Rogers, Colin, 81h:73017**

Crespo da Silva, M. R. M. Nonlinear resonances in a column subjected to a constant end force. **81c:73019**

Kluwick, A. (*with* Nayfeh, Ali Hasan) Nonlinear waves in homogeneous and heterogeneous elastic solids. (French summary) **81f:73013**

Kuznecov, G. B. (*with* Matveenko, V. P.; Trojanovskiĭ, I. E.) Forced oscillations of a short viscoelastic cylinder. (Russian) **81m:73031**

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(Rahmatulin, H. A.) *See* **Žubaev, N. Ž., 81f:73014**

Rogers, Colin (*with* Baker, John A.) The finite elastodynamics of hyperelastic thin tubes. (French and German summaries) **81h:73017**

Sugimoto, Nobumasa (*with* Majima, Yoshiyuki) Nonlinear third harmonic resonance of flexural waves on a waveguide of thin elastic plate. **81m:73032**

Szemplińska-Stupnicka, W. The effects of geometric nonlinearities on the resonant phenomena in multidegree-of-freedom systems. (German and Russian summaries) **81b:73012**

Trojanovskiĭ, I. E. *See* **Kuznecov, G. B.; et al., 81m:73031**

Žubaev, N. Ž. ★Одномерные упруго-пластические волны при сложном нагружении. (Russian) [One-dimensional elastoplastic waves in the case of complex loading] **81f:73014**

secondary classifications:

Ablowitz, Mark J. (*with* Askar, Attila; Cakmak, A. S.; Engin, H.) Resonant nonlinear vibrations in continuous systems. I. Undamped case. (French and German summaries) **(81j:35009)**

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Askar, Attila *See* **Ablowitz, Mark J.; et al., (81j:35009)** *and* **Engin, H.; et al., (81j:35010)**

Bogomolov, S. I. (*with* Smirnov, M. M.; Simson, È. A.; Guglja, T. Ju.) Free geometrically nonlinear oscillations of ring-shaped plates in the presence of static forces in the middle surface. (Russian) **(81k:73033)**

Brézis, Haïm Cordes vibrantes non linéaires. **(81a:35065)**

Cakmak, A. S. *See* **Ablowitz, Mark J.; et al., (81j:35009)** *and* **Engin, H.; et al., (81j:35010)**

Engelbrecht, J. Corrected nonlinear equations for deformation wave processes. **(81d:73015)**

Engel'brecht, Ju. K. On the theory of nonlinear strain waves in an inhomogeneous medium. **(81c:73022)**

Engin, H. (*with* Ablowitz, Mark J.; Askar, Attila; Cakmak, A. S.) Resonant nonlinear vibrations of continuous systems. II. Damped and transient behavior. (French and German summaries) **(81j:35010)**

See also **Ablowitz, Mark J.; et al., (81j:35009)**

Gordon, V. A. (*with* Mažeru, V. V.) A method for solving equations of the dynamics of a rod of variable curvature. (Russian) **(81j:73062)**

Guglja, T. Ju. *See* **Bogomolov, S. I.; et al., (81k:73033)**

Mažeru, V. V. *See* **Gordon, V. A., (81j:73062)**

Obrazcova, E. I. (*with* Škljarčuk, F. I.) Nonlinear parametric oscillations of a cylindrical tank with a fluid. **(81c:73035)**

Reeken, Michael Rotating chain fixed at two points vertically above each other. **(81h:34019)**

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73D50 Inverse problems [See also 35Lxx, 35R30.]

73D70 Random waves

73D99 None of the above, but in this section

Aboudi, Jacob Numerical methods in elastodynamics. **81c:73020**

Alekseev, A. S. (*with* Cibul'čik, G. M.) The relation between inverse problems in wave propagation theory and problems of wave field visualization. (Russian) **81j:73032**

Al'šic, V. I. (*with* Lothe, J.) Elastic waves in triclinic crystals. I. General theory and the degeneracy problem. **81k:73020**

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Bolotin, V. V. ★Случайные колебания упругих систем. (Russian) [Random vibrations of elastic systems] **81c:73021**

Brock, L. M. Wave propagation in an elastic half-space due to surface pressure over a nonuniformly changing circular zone. **81e:73028**

Chadwick, Paul (*with* Currie, Peter K.) Transmission of generalized transverse waves in heat-conducting elastic materials. (Polish) **(*See* 81f:73001)**

(*with* Currie, Peter K.) Intrinsically characterized acceleration waves in heat-conducting elastic materials. (Polish) **(*See* 81f:73001)**

Interchange of modal properties in the propagation of harmonic waves on heat-conducting materials. (Polish) **(*See* 81f:73001)**

(*with* Currie, Peter K.) Propagation and growth of acceleration waves in heat-conducting elastic materials. (Polish) **(*See* 81f:73001)**

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Council, Francis E., Jr. A new technique for the solution of Navier's equations. **81a:73020**

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Dassios, George (*with* Galanis, Efstratios) Asymptotic equipartition of kinetic and strain energy for elastic waves in anisotropic media. **81e:73029**

Dihamidžia, R. G. Asymptotic distribution of eigenfunctions of the third and fourth oscillation problems of the couple-stress theory of elasticity. (Russian. Georgian and English summaries) **81g:73033**

Egorov, A. I. (*with* Fomenko, A. V.) Optimal stabilization of elastic systems. (Russian) **81g:73034**

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Every, A. G. General closed-form expressions for acoustic waves in elastically anisotropic solids. **81g:73035**

Filippov, I. G. The effect of viscosity on stress wave propagation in elastic bodies under dynamic loads. (Russian) **81d:73026**

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Gómez Trapote, Alberto Hamilton waves in the theory of percussions. (Spanish) **(*See* 81j:00009)**

Hegedüš, Pavol (*with* Kolník, Stanislav) Some invariance relations for elastic waves in crystals. (Russian summary) **81a:73021**

Kolník, Stanislav *See* **Hegedüš, Pavol, 81a:73021**

Krasnuškin, P. E. An impedance-scaling method in problems of wave propagation in elastic media. (Russian) **81m:73033**

Krauklis, L. A. (*with* Krauklis, P. V.) Kinematics and dynamics of a hydraulic wave propagated in a cased cemented borehole. (Russian) **81d:73027**

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Lothe, J. *See* **Al'šic, V. I., 81k:73020** *and* **Al'šic, V. I., 81k:73021**

Lustman, Liviu A note on nonbreaking waves in hyperelastic materials. **81h:73018**

Markenscoff, Xanthippi Fourth-order elastic constants: general method for determination and applications. (French summary) **81e:73030**

Pao, Yih Hsing Theory of acoustic emission. **(*See* 81m:00008)**

Parhomovskiĭ, Ja. M. Torsion-bending vibrations of an airfoil. (Russian) **81j:73033**

Poddubnyĭ, V. I. (*with* Saltanov, M. V.) Oscillations of an elastic thread in a flow. (Russian) **81e:73031**

Saltanov, M. V. *See* **Poddubnyĭ, V. I., 81e:73031**

Senickiĭ, Ju. È. A generalized method of finite integral transformations in problems of the dynamic theory of elasticity. (Russian) **81j:73034**

Smirnov, A. B. (*with* Troickiĭ, V. A.) Optimization of natural vibrational frequencies of curvilinear thin elastic rods. **81d:73028**

Stepanov, A. I. *See* **Valčev, K. G., 81g:73036**

Ting, T. C. T. Wave propagation in periodically layered media. **(*See* 81m:00008)**

Troickiĭ, V. A. *See* **Smirnov, A. B., 81d:73028**

Tulegenov, M. U. (*with* Andasov, M. A.) Investigation of random oscillations of a bellows. (Russian. Kazakh summary) **81k:73019**

Valčev, K. G. (*with* Stepanov, A. I.) Some particular solutions of a dynamical three-dimensional problem of elasticity theory. (Russian) **81g:73036**

Wada, Hiroshi Reflection characteristics of torsional waves in a semi-infinite cylindrical rod connected to an elastic half-space. **81d:73029**

Wallace, Duane C. Equation of state from weak shocks in solids. **81j:73035**

Wesołowski, Zbigniew The acceleration wave and the wave of strong discontinuity in a nonlinear elastic medium. (Polish) (*See* **81f:73001**)

Willis, J. R. (*with* Bedding, R. J.) Transient elastodynamic fields in anisotropic plates and layers. (*See* **80d:73008**)

Wyrwiński, Julian Propagation of acceleration waves in a constrained medium. (Polish) (*See* **81f:73001**)

secondary classifications:

Béda, Gyula A mathematical method for investigations in plasticity theory. (Hungarian. English summary) **(81h:73022)**

Beuveniste, Y. Some dynamic problems of incompressible elastic materials with different moduli in tension and compression. (German summary) **(81d:73014)**

Cella, A. (*with* Lucchesi, M.; Pasquinelli, G.) Space-time elements for the shock wave propagation problem. **(81m:65168)**

Černjavskiĭ, S. M. Optimal control of vibration damping in elastic systems. (Russian) **(81k:93040)**

Chandrasekharaiah, D. S. On generalised thermoelastic wave propagation. **(81m:73080)**

D'Anna, Armando (*with* de Socio, Luciano; Renno, Pasquale) Three-dimensional wave propagation in a semi-infinite relaxing continuum. **(81e:76074)**

Gaĭduk, S. I. Mathematical examination of certain mixed problems in the theory of mechanical shock. (Russian) **(81k:35103)**

Gorikov, A. G. Interaction of shock waves with deformable obstacles. (Russian) **(81m:73003)**

Grilic'kiĭ, D. V. (*with* Oniščuk, V. Ja.) The nonstationary sonic field around a hollow empty elastic sphere. (Russian) **(81c:76036)**

Gubanova, I. I. *See* **Panovko, Ja. G., (81b:73001)**

Hronin, D. V. ★Колебания в двигателях летательных аппаратов. (Russian) [Vibrations in aircraft engines] **(81c:73044)**

Karaulia, D. S. *See* **Srivastava, K. N.; et al., (81h:73049)**

Koval'čuk, P. S. Dynamical analysis of nonconservative elastic systems. (Russian) **(81d:73019)**

Longman, I. M. Wave propagation in a viscoelastic solid. **(81g:73052)**

Lucchesi, M. *See* **Cella, A.; et al., (81m:65168)**

Melville, P. H. Effect of reflected stress waves in finite specimens on the dynamic stress intensity factor of a propagating mode III crack. **(81g:73108)**

Natroĭvili, D. G. Fundamental matrices of equations of steady oscillations and pseudo-oscillations of the anisotropic theory of elasticity. (Russian. Georgian and English summaries) **(81d:73008)**

Oniščuk, V. Ja. *See* **Grilic'kiĭ, D. V., (81c:76036)**

Palaiya, R. M. *See* **Srivastava, K. N.; et al., (81h:73049)**

Panovko, Ja. G. (*with* Gubanova, I. I.) ★Устойчивость и колебания упругих систем. (Russian) [Stability and oscillations of elastic systems] **(81b:73001)**

Pasquinelli, G. *See* **Cella, A.; et al., (81m:65168)**

(Petraŝen', G. I.) *See* **Questions in the dynamical theory of seismic wave propagation, (81b:86003)**

Pupyrev, V. A. Relative effectiveness of variational principles in the Ritz method. **(81h:49023)**

Ramamurti, V. *See* **Srinivasan, V., (81f:73022)**

Renno, Pasquale *See* **D'Anna, Armando; et al., (81e:76074)**

de Socio, Luciano *See* **D'Anna, Armando; et al., (81e:76074)**

Srinivasan, V. (*with* Ramamurti, V.) Stability and vibration of an annular plate with concentrated edge load. **(81f:73022)**

Srivastava, K. N. (*with* Palaiya, R. M.; Karaulia, D. S.) Interaction of torsional wave by penny-shaped crack at the interface of two bonded dissimilar elastic solids. (German and Russian summaries) **(81h:73049)**

(Volin, A. P.) *See* **Questions in the dynamical theory of seismic wave propagation, (81b:86003)**

Questions in the dynamical theory of seismic wave propagation ★Вопросы динамической теории распространения сейсмических волн. Вып. XIX. (Russian) [Questions in the dynamical theory of seismic wave propagation. No. 19] **(81b:86003)**

Wave propagation ★Вопросы динамической теории распространения сейсмических волн. Вып. XIX. (Russian) [Questions in the dynamical theory of seismic wave propagation. No. 19] **(81b:86003)**

73Exx Plasticity

73E05 Yield criteria and flow rules

Annin, B. D. Variational formulations of elastoplastic problems. (Russian) **81d:73030**

Bykovcev, G. I. (*with* Hromov, A. I.) Plane strain in ideal plastic-rigid materials with surface changes. **81e:73032**

Cryer, Colin W. The solution of the axisymmetric elastic-plastic torsion of a shaft using variational inequalities. **81k:73022**

Hromov, A. I. *See* **Bykovcev, G. I., 81e:73032**

Kljušnikov, V. D. ★Математическая теория пластичности. (Russian) [Mathematical theory of plasticity] **81j:73036**

König, Jan A. On the incremental collapse criterion accounting for temperature dependence of yield point stress. (Polish and Russian summaries) **81k:73023**

Korneev, V. G. Approximate solution of the theory of plastic flow for media subject to Coulomb's yield criterion. (Russian) **81f:73015**

Kujawski, D. (*with* Mróz, Z.) A viscoplastic material model and its application to cyclic loading. (German summary) **81d:73031**

Lubliner, J. On thermodynamic yield criteria. (German summary) **81g:73037**
An axiomatic model of rate-independent plasticity. **81e:73033**

Mróz, Z. *See* **Kujawski, D., 81d:73031**

Müller, Ingo A model for a body with shape-memory. **81c:73023**

Polizzotto, C. On work-hardening adaptation of discrete structures under dynamic loadings. (Polish and Russian summaries) **81g:73038**

Sboenaker, E. M. The ultimate load interaction surface. (German summary) **81g:73039**

Telega, J. J. Variational principles for rate boundary value problems in nonassociated plasticity. (German and Russian summaries) **81j:73037**

Tokuoka, T. Prandtl-Reuss plastic material with scalar and tensor internal variables. (Polish and Russian summaries) **81b:73013**

Weng, George J. The yield surface of single crystals at arbitrary strain. (German summary) **81g:73040**

Yang, W. H. A useful theorem for constructing convex yield functions. **81h:73020**

secondary classifications:

Chen, Peter C. T. A finite-difference approach to axisymmetric plane-strain problems beyond the elastic limit. **(81b:73014)**

Dowling, P. J. *See* **Javaherian, H.; et al., (81g:73084)**

Javaherian, H. (*with* Dowling, P. J.; Lyons, L. P. R.) Nonlinear finite element analysis of shell structures using the semi-Loof element. **(81g:73064)**

Lyons, L. P. R. *See* **Javaherian, H.; et al., (81g:73084)**

Mercier, B. ★Inéquations variationnelles de la mécanique. (French) [Variational inequalities of mechanics] **(81g:49014)**

Sanguineti, Giannina An application of the cosinusoidal plasticity condition. (Italian summary) **(81c:73029)**

Sirazetdinov, F. G. *See* **Teregulov, I. G., (81h:73046)**

Teregulov, I. G. (*with* Sirazetdinov, F. G.) A geometrically nonlinear problem of the dynamics of a plastic shallow spherical shell. (Russian) **(81h:73046)**

73E10 Method of successive approximations

73E15 Slip-line theory

Romenskiĭ, E. I. Distribution of small deformations in a plastic medium and sliding lines. (Russian) **81h:73021**

73E20 Limit analysis

secondary classifications:

Temam, Roger Mathematical problems in plasticity. **(81m:73038)**

73E25 Creep

Arutjunjan, N. H. (*with* Kolmanovskiĭ, V. B.) An optimization problem in creep theory for inhomogeneous beams subjected to aging. (Russian) **81f:73016**

Gupta, S. K. Lebesgue measure for creep. (French and German summaries) **81e:73034**

Hill, Rodney (*with* Storåkers, B.) Plasticity and creep of pressurized membranes: a new look at the small-deflection theory. **81g:73041**

Kolmanovskiĭ, V. B. *See* **Arutjunjan, N. H., 81f:73016**

Simonjan, A. M. Some aspects of uniaxial creep of metals. (Russian. Armenian and English summaries) **81g:73042**

Storåkers, B. *See* **Hill, Rodney, 81g:73041**

Zadojan, M. A. Mixed variational equation for plates and shells of nonlinear hereditary-aging material. **81m:73034**

73E50 Time-dependent problems

73E99 None of the above, but in this section

Argyris, J. H. (*with* Doltsinis, J. St.; Wüstenberg, H.) On the analysis of forming problems in natural formulation. **81k:73024**

Backhaus, G. Plastic deformation in form of strain trajectories of constant curvature—theory and comparison with experimental results. (German summary) **81e:73035**

Bassani, J. L. (*with* Durban, D.; Hutchinson, J. W.) Bifurcations at a spherical hole in an infinite elastoplastic medium. **81d:73032**

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Betten, J. Über die Konvexität von Fließkörpern isotroper und anisotroper Stoffe. (English summary) **81d:73033**

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Franchi, Alberto (*with* Cohn, M. Z.) Computer analysis of elastic-plastic structures. (81b:73039)
Gasanova, D. D. (*with* Shamiev, F. G.) On the optimization of annular plates resting on incompressible liquid. (Polish and Russian summaries) (81b:73044)
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Badalov, F. B. ★Метод степенных рядов в нелинейной наследственной теории вязкоупругости. (Russian) [The method of power series in the nonlinear hereditary theory of viscoelasticity] (81m:73002)
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73F10 Correspondence principle

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73Gxx Finite deformations

73G05 Finite elasticity

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Argyris, J. H. (*with* Doltsinis, J. St.; Wüstenberg, H.) On the analysis of forming problems in natural formulation. **(81k:73024)**
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Dost, S. *See* **Tabarrok, B., (81k:73039)**
Paradiso, Michele *See* **di Pasquale, Salvatore; et al., (81c:73043)**
di Pasquale, Salvatore (*with* Paradiso, Michele; Reale, Enrico) Matrix formulation of large deformation analysis. (German and Russian summaries) **(81c:73043)**
Reale, Enrico *See* **di Pasquale, Salvatore; et al., (81c:73043)**
Rothert, H. Large elastic deformations of shell structures. (German and Russian summaries) **(81b:73031)**
Tabarrok, B. (*with* Dost, S.) Some variational formulations for large deformation analysis of plates. **(81k:73039)**
Wüstenberg, H. *See* **Argyris, J. H.; et al., (81k:73024)**

73G10 Strain energy functions

de Jong, J. E. *See* **Nagtegaal, J. C., 81m:73040**
Nagtegaal, J. C. (*with* de Jong, J. E.) Some computational aspects of elastic-plastic large strain analysis. **81m:73040**

73G15 Finite viscoelasticity

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Roberts, D. H. (*with* Green, W. A.) Large axisymmetric deformation of a nonlinear viscoelastic circular membrane. (German summary) **81h:73027**

73G20 Metal forming problems

Durban, D. Drawing of tubes. **81m:73041**

secondary classifications:

Chen, Peter C. T. Large plastic deformation in a deep drawing process. (*See* **81m:73010**)

73G99 None of the above, but in this section

Il'jušin, A. A. Two problems of the mechanics of a rigid deformable body. (Russian) (*See* **80f:35002**)
Kosiński, Witold A uniqueness theorem for the dynamic initial-displacement boundary value problem in the theory with internal state variables. **81g:73060**

secondary classifications:

Abeyaratne, Rohan C. Discontinuous deformation gradients in plane finite elastostatics of incompressible materials. **(81k:73028)**
Guz', O. M. (*with* Košman, V. P.) A nonstationary problem of the theory of elasticity for an incompressible half-plane with initial stresses. (Russian. English summary) **(81i:73003)**
Heise, Herbert (*with* Palazotto, Anthony N.) Elastic-plastic anisotropic materials. **(81m:73036)**
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Palazotto, Anthony N. *See* **Heise, Herbert, (81m:73036)**

73Hxx Stability (linear and nonlinear)

73H05 Buckling

Antman, Stuart S. Geometric aspects of global bifurcation in nonlinear elasticity. **81j:73049**
(*with* Nachman, Arje) Large buckled states of rotating rods. **81e:73044**
(*with* Rosenfeld, Gerald) Corrections and additions: "Global behavior of buckled states of nonlinearly elastic rods" [SIAM Rev. **20** (1978), no. 3, 513–566; MR **58** #14107]. **81m:73042**
Avraam, T. P. (*with* Pantis, M. A.; Kounadis, A. N.) Snap-through buckling of a simple frame with a tangential load. **81c:73033**
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Frisch-Fay, R. Buckling of masonry pier under its own weight. **81b:73021**
Gellin, Slade The plastic buckling of long cylindrical shells under pure bending. **81b:73022**
Guz', O. M. (*with* Kuliev, G. G.; Zeĭnalov, N. K.) Buckling of a stretched thin plate with a curvilinear aperture. **81c:73034**
Hanna, S. Y. (*with* Michalopoulos, C. D.) Improved lower bounds for buckling loads and fundamental frequencies of beams. **81e:73045**
Hansen, J. S. *See* **Hui, D., 81g:73061**
Haughton, D. M. (*with* Ogden, R. W.) Bifurcation of rotating thick-walled elastic tubes. **81j:73050**
van der Heijden, A. M. A. A study of Hutchinson's plastic buckling model. **81a:73025**
Hui, D. (*with* Hansen, J. S.) Two-mode buckling of an elastically supported plate and its relation to catastrophe theory. **81g:73061**
Iremonger, M. J. Finite difference buckling analysis of nonuniform columns. **81k:73030**
Kao, Robert Large deformation elastic-plastic buckling analysis of spherical caps with initial imperfections. **81e:73046**
Knightly, George H. (*with* Sather, D.) Buckled states of a spherical shell under uniform external pressure. **81f:73021**
Kounadis, A. N. (*with* Economou, A. P.) The effects of the joint stiffness and of the constraints on the type of instability of a frame under a follower force. (German summary) **81d:73046**
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Litvinov, V. G. (*with* Medvedev, N. G.) Some questions of the stability of shells of revolution. (Russian) **81d:73047**
Matkowsky, Bernard J. (*with* Putnick, Leonard J.; Reiss, Edward L.) Secondary states of rectangular plates. **81a:73026**
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Nachman, Arje *See* **Antman, Stuart S., 81e:73044**
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Palassopoulos, G. V. A probabilistic approach to the buckling on thin cylindrical shells with general random imperfections: solution of the corresponding deterministic problem. **81m:73043**
Pantis, M. A. *See* **Avraam, T. P.; et al., 81c:73033**
Plaut, Raymond H. Post-buckling behavior of continuous, nonconservative elastic systems. (German summary) **81d:73048**
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Reiss, Edward L. *See* **Matkowsky, Bernard J.; et al., 81a:73026**
Rosenfeld, Gerald *See* **Antman, Stuart S., 81m:73042**
Samuels, P. Bifurcation and limit point instability of dual eigenvalue third-order systems. **81e:73047**
Sather, D. *See* **Knightly, George H., 81f:73021**
Schmidt, Robert Buckling of rings subjected to unconventional loads. **81j:73051**
Srinivasan, V. (*with* Ramamurti, V.) Stability and vibration of an annular plate with concentrated edge load. **81f:73022**
Stasjuk, M. F. Equivalence of two generalized spectral problems of the theory of elastic stability. (Russian) **81a:73027**
Syngellakis, S. (*with* Walker, A. C.) Elastic buckling of cylinders with widely spaced stiffeners. **81e:73048**
Walker, A. C. *See* **Syngellakis, S., 81e:73048**
Wan, Frederic Y. M. The buckling of flexible columns. **81j:73052**
Wellford, L. Carter, Jr. (*with* Dib, Ghassan M.) Post-buckling behaviour of structures using a finite element-nonlinear eigenvalue technique. **81d:73049**
Zeĭnalov, N. K. *See* **Guz', O. M.; et al., 81c:73034**

secondary classifications:

Argyris, J. H. (*with* Dunne, P. C.) Post-buckling finite element analysis of circular cylinders under end load. (German and Russian summaries) **(81b:73034)**
Aslanov, G. M. On the question of dynamic stability of an elastic rod. (Russian. Azerbaijani and English summaries) **(81m:73044)**
Bathe, Klaus-Jürgen (*with* Ramaswamy, Seshadri) An accelerated subspace iteration method. **(81g:65046)**
Brusnikin, V. N. Determination of the critical load in computing the strength of plates. (Russian) **(81h:73031)**
Cinquini, C. (*with* Sacchi, G.) Problems of optimal design for elastic and plastic structures. (French summary) **(81a:73036)**
Dangelmayr, G. Catastrophes and bifurcations in variational problems. **(81d:58024)**
Dunne, P. C. *See* **Argyris, J. H., (81b:73034)**
Ericksen, J. L. Periodic solutions for elastic prisms. **(81d:73043)**
Hoffman, Wilfried (*with* Küpper, Tassilo) Punktweise Abschätzungen zur Ermittlung des Einflusses von Störtermen bei Verzweigungsproblemen. (English summary) **(81g:34023)**
Holmes, Philip J. (*with* Marsden, Jerrold E.) Bifurcations to divergence and flutter in flow-induced oscillations: an infinite-dimensional analysis. **(81m:73047)**
Hunt, Giles W. Imperfections and near-coincidence for semisymmetric bifurcations. **(81g:58006)**
(*with* Reay, N. A.; Yoshimura, T.) Local diffeomorphisms in the bifurcational manifestations of the umbilic catastrophes. **(81g:58005)**
Huseyin, K. The multiple-parameter stability theory and its relation to catastrophe theory. (*See* **80h:00004**)
Kikuchi, Fumio On a mixed finite element scheme for linear buckling analysis of plates. **(81g:73085)**
Kodama, S. *See* **Yamaki, N., (81h:73048)**
Küpper, Tassilo *See* **Hoffman, Wilfried, (81g:34023)**
Marsden, Jerrold E. *See* **Holmes, Philip J., (81m:73047)**
Ramaswamy, Seshadri *See* **Bathe, Klaus-Jürgen, (81g:65046)**
Ramsey, H. Localized plastic buckling deformation in axially compressed cylindrical shells. **(81g:73099)**
Reay, N. A. *See* **Hunt, Giles W.; et al., (81g:58005)**
Sacchi, G. *See* **Cinquini, C., (81a:73036)**
Schmidt, Robert Some inconsistencies arising in applications of Galerkin's method to bifurcation problems of elastic lability. **(81m:65139)**
Thompson, J. M. T. Bifurcational aspects of catastrophe theory. **(81h:58021)**
Vlelsack, Peter The analogy between elastic rods and rigid body motions. II. Linear theory. **(81h:73030)**
Wu, Chien H. Plane-strain buckling of cracks in incompressible elastic solids. **(81d:73090)**
Yamaki, N. (*with* Kodama, S.) Perturbation analyses for the postbuckling and imperfection sensitivity of circular cylindrical shells under torsion. **(81h:73048)**
Yoshimura, T. *See* **Hunt, Giles W.; et al., (81g:58005)**

73H10 Dynamic stability

Aslanov, G. M. On the question of dynamic stability of an elastic rod. (Russian. Azerbaijani and English summaries) **81m:73044**

Baničuk, N. V. (*with* Gura, N. M.) A dynamic problem of optimal design. (Russian) **81g:73062**
Beskos, D. E. *See* **Manolis, G. D.,** (*See* **81m:73010**)
Gura, N. M. *See* **Baničuk, N. V.,** **81g:73062**
Kao, Robert Nonlinear dynamic buckling of spherical caps with initial imperfections. **81f:73023**
Kar, R. C. Stability of a nonuniform cantilever subjected to dissipative and nonconservative forces. **81b:73023**
Manolis, G. D. (*with* Beskos, D. E.) Dynamic response of beam structures with the aid of numerical Laplace transform. (*See* **81m:73010**)
Mladenov, K. Stability of a straight rod subjected to central distributed loads. (Bulgarian. Russian and English summaries) **81f:73024**
Moon, Francis C. Experimental models for strange attractor vibrations in elastic systems. **81j:73053**
Tusupbaev, M. D. Some theorems on separation of variables and the fundamental function in problems of dynamical stability of elastic systems. (Russian) **81k:73031**
Vasilakis, J. D. *See* **Wu, Julian J., 81a:73028**
Wu, Julian J. (*with* Vasilakis, J. D.) Dynamic stability of columns subjected to nonconservative forces. **81a:73028**

secondary classifications:

Del Piero, Gianpietro Lower bounds for the critical loads of elastic bodies. (Italian summary) **81d:73045**
Hanaoka, M. (*with* Washizu, Kyuichiro) Optimum design of Beck's column. **81h:73043**
Riks, E. A unified method for the computation of critical equilibrium states of nonlinear, elastic systems. **81b:73024**
Washizu, Kyuichiro *See* **Hanaoka, M., 81h:73043**

73H99 None of the above, but in this section

Bolotin, V. V. The effects of stabilization and destabilization in problems of the stability of elastic systems. (Russian) **81g:73063**
Deschler, William H. (*with* Palazotto, Anthony N.) The use of trigonometric finite differences in virtual work expressions for plate instability. (*See* **81i:90005**)
Hadžov, K. *See* **Popov, K., 81k:73032**
Kirakosjan, R. M. On stability of nonelastic circular plates with account taken of the effects of deformations of transversal displacements. (Russian. Armenian and English summaries) **81g:73064**
Kljušnikov, V. D. Singular points of processes of deformation of complex media. **81g:73065**
Leipholz, H. H. E. On a Liapunov-like approach to the stability limit of Pflüger's rod. **81e:73049**
Palazotto, Anthony N. *See* **Deschler, William H.,** (*See* **81i:90005**)
Parry, Gareth P. On the relative strengths of stability criteria in anisotropic materials. **81e:73050**
Popov, K. (*with* Hadžov, K.) Stability of a straight polymer rod with variable properties. (Bulgarian. Russian and French summaries) **81k:73032**
Riks, E. A unified method for the computation of critical equilibrium states of nonlinear, elastic systems. **81b:73024**
Rionero, Salvatore On the use of weighted norms in stability questions on exterior domains. **81d:73050**
Simeonov, S. V. A statistical analysis of one-dimensional deformable systems with single and double nonlinearity. (Bulgarian. Russian and English summaries) **81g:73066**
Valid, Roger Le critère de stabilité structurale pour les principes mixtes. (English summary) **81f:73025**

secondary classifications:

Bolenov, A. Š. On the application of the grid method in investigation of the stability of plates in a refined formulation. (Russian. Kazakh summary) **(81g:73087)**
(Četaev, N. G.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
Chillingworth, David A global genericity theorem for bifurcations in variational problems. **(81g:58007)**
Gubanova, I. I. *See* **Panovko, Ja. G., (81b:73001)**
Iannece, Donatella An energy and stability criterion for a moving dielectric continuum. (Italian) **(81a:73050)**
John, Fritz Nonexistence of global solutions of $\Box u = F(u_{tt})$ and of $\Box v = F'(v_t)v_{tt}$ in three space dimensions. **(81g:35062)**
Kljušnikov, V. D. ★Математическая теория пластичности. (Russian) [Mathematical theory of plasticity] **(81j:73036)**
Komkov, Vadim A dual form of Noether's theorem with applications to continuum mechanics. **(81e:49036)**
Litvinenko, I. N. (*with* Rodzevič, E. G.) Longitudinal bending of a rod with complexly distributed forces. (Russian) **(81k:73035)**
(Matrosov, V. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
(Pančenkov, A. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
Panovko, Ja. G. (*with* Gubanova, I. I.) ★Устойчивость и колебания упругих систем. (Russian) [Stability and oscillations of elastic systems] **(81b:73001)**
Peiffer, Karl An example of nonisolated equilibrium with maximum potential, stabilized by dissipative forces. (French summary) **(81b:70014)**
Rodzevič, E. G. *See* **Litvinenko, I. N., (81k:73035)**
Wilkes, N. S. On the stability of multipolar elastic materials. **(81a:73004)**
All-Union Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion
★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Analytical mechanics ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Anniversary:
Birth of N. G. Četaev ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion
★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Irkutsk ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Problems of stability of motion, analytical mechanics and control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Stability of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**

73Jxx Aero- and hydroelasticity

73J05 Interaction of aerodynamics and elasticity

Bauer, H. F. (*with* Metten, St.; Siekmann, J.) Dynamic behavior of distensible fluid lines carrying a pulsating incompressible liquid. (German and Russian summaries) **81j:73055**
Dżygadło, Zbigniew (*with* Sobieraj, Wiesław) A dynamic model of a helicopter rotor blade for vibration analysis by the finite element method. (Polish. English and Russian summaries) (*See* **81m:73008**)
Kiselev, O. M. (*with* Rapoport, È. F.) An elastic plate in a supersonic gas flow. (Russian) **81m:73045**
Loginov, B. V. The problem of airfoil divergence as an example of the theory of branching of solutions of nonlinear equations with two small parameters. (Russian) **81k:73033**
Metten, St. *See* **Bauer, H. F.; et al., 81j:73055**
Petre, Augustin On the deformation of one-dimensional structures. **81d:73051**
Rapoport, È. F. *See* **Kiselev, O. M., 81m:73045**
(Sedov, L. I.) *See* **Mechanics of a solid deformable body, 81j:73054**
Seiranjan, A. P. An optimal problem of aileron efficiency. (Russian. Armenian and English summaries) **81i:73007**
Siekmann, J. *See* **Bauer, H. F.; et al., 81j:73055**
Sobieraj, Wiesław *See* **Dżygadło, Zbigniew,** (*See* **81m:73008**)
Itogi Nauki i Tekniki ★Механика деформируемого твердого тела. Том 13. (Russian) [Mechanics of a solid deformable body. Vol. 13] **81j:73054**
Mechanics of a solid deformable body ★Механика деформируемого твердого тела. Том 13. (Russian) [Mechanics of a solid deformable body. Vol. 13] **81j:73054**

secondary classifications:

Lopat'ev, A. A. (*with* Matkovskiĭ, A. P.) A study of the effect of thermoelastic scattering on the coefficient of reflection of plane harmonic waves off a plane boundary between a fluid and a solid. (Russian) **(81g:73122)**
Matkovskiĭ, A. P. *See* **Lopat'ev, A. A., (81g:73122)**

73J06 Interaction of hydrodynamics and elasticity

Kiselev, O. M. (*with* Rapoport, È. F.) Jet flow around an elastic shell with various methods for its fastening. (Russian) **81g:73067**
(*with* Rapoport, È. F.) Jet flow around an elastic shell of variable rigidity. (Russian) **81g:73068**
Ngo Zui Kan Motion of an ideal fluid subject to surface-tension forces and filling a vessel with a plane elastic bottom. **81m:73046**
Obrazcova, E. I. (*with* Škljarčuk, F. I.) Nonlinear parametric oscillations of a cylindrical tank with a fluid. **81c:73035**
Rapoport, È. F. *See* **Kiselev, O. M., 81g:73067** *and* **Kiselev, O. M., 81g:73068**
Škljarčuk, F. I. *See* **Obrazcova, E. I., 81c:73035**

secondary classifications:

Filippi, P. *See* **Saadat, H., (81m:76035)**
Saadat, H. (*with* Filippi, P.) Diffraction of a spherical wave by a thin infinite plate. **(81m:76035)**

73J10 Vibrations, flutter

Dulina, N. G. Investigation of the effect of the parameters of composition of an airfoil with motors on the size of the critical flutter velocity. (Russian) **81h:73028**
Dušin, A. V. The behavior of eigenvalues of a differential operator that is connected with the problem of "panel flutter". (Russian) **81c:73036**
Holmes, Philip J. (*with* Marsden, Jerrold E.) Bifurcations to divergence and flutter in flow-induced oscillations: an infinite-dimensional analysis. **81m:73047**
Marsden, Jerrold E. *See* **Holmes, Philip J., 81m:73047**

Singa Rao, K. (*with* Venkateswara Rao, G.) Large amplitude supersonic flutter of panels with ends elastically restrained against rotation. **81b:73025**

Venkateswara Rao, G. *See* **Singa Rao, K., 81b:73025**

secondary classifications:

Holmes, Philip J. (*with* Marsden, Jerrold E.) Bifurcations of dynamical systems and nonlinear oscillations in engineering systems. **(81j:58062)**

(*with* Marsden, Jerrold E.) Qualitative techniques for bifurcation analysis of complex systems. **(81h:34052)**

(*with* Marsden, Jerrold E.) Dynamical systems and invariant manifolds. **(81k:34042)**

Klonowska, Maria E. *See* **Prosnak, Włodzimierz J., (81a:76007)**

Marsden, Jerrold E. *See* **Holmes, Philip J., (81h:34052); Holmes, Philip J., (81j:58062)** *and* **Holmes, Philip J., (81k:34042)**

Prosnak, Włodzimierz J. (*with* Klonowska, Maria E.) Unsteady potential flow around an arbitrary system of profiles. (Russian summary) **(81a:76007)**

73J15 Divergence

secondary classifications:

Economou, A. P. *See* **Koumadis, A. N., (81d:73046)**

Koumadis, A. N. (*with* Economou, A. P.) The effects of the joint stiffness and of the constraints on the type of instability of a frame under a follower force. (German summary) **(81d:73046)**

73J99 None of the above, but in this section

Gurevič, I. L. Bifurcation of solutions of a hydroelasticity problem. (Russian) **81g:73069**

secondary classifications:

Friedrich, N. Zur Faktorisierung einiger Kerne, die bei Ausstrahlungsproblemen der Elektrodynamik und Aeroelastizität auftreten. **(81j:33009)**

73Kxx Structural mechanics

73K03 Strings

73K05 Beams, columns, rods

Amari, Masahiko (*with* Okumura, Atsubumi) Optimum design of elastic-plastic column. **81g:73070**

Amrahov, A. N. Dynamic torsion of a conical rod. **81c:73037**

Artola, Michel (*with* Duvaut, Georges) Homogénéisation d'une plaque renforcée par un système périodique de barres curvilignes. (English summary) **81e:73051**

Babložjan, A. A. (*with* Mkrtčjan, A. M.) Torsion of rods with cross sections in the form of combinations of rectangles and ring sectors. (Russian. Armenian and English summaries) **81j:73056**

Berdičevskiĭ, V. L. Variational-asymptotic method of constructing the nonlinear shell theory. **81k:73034**

Boudet, René *See* **Gay, Daniel, 81j:73057**

Chen, Wai Fah Moment-curvature relation of fabricated tubular columns. (*See* **81m:73010**)

Crăciun, Ion Al. Flexure of micropolar elastic almost cylindrical beams. **81m:73048**

Ducomet, B. Sur le problème de flexion circulaire d'une poutre élastoplastique constituée d'un matériau de von Mises. (English summary) **81m:73049**

Duvaut, Georges *See* **Artola, Michel, 81e:73051**

Gay, Daniel (*with* Boudet, René) Sur une formulation technique complète de la torsion non uniforme des poutres de sections quelconques. (English summary) **81j:73057**

Gordeev, G. G. Approximate solution of a problem of deformation of an elastic rod. (Russian) **81f:73026**

Holnicki-Szulc, Jan (*with* Rogula, D.) Nonlocal, continuum models of large engineering structures. (Polish and Russian summaries) **81i:73008**

(*with* Rogula, D.) Boundary problems in nonlocal continuum models of large engineering structures. (Polish and Russian summaries) **81j:73058**

Lepik, Ü. (*with* Sakkov, E.) Supplement to the dynamic problem of optimization of rigid-plastic beams in an approximate formulation. (Russian. Estonian and English summaries) **81j:73059**

Litvinenko, I. N. (*with* Rodzevič, E. G.) Longitudinal bending of a rod with complexly distributed forces. (Russian) **81k:73035**

Maceri, Aldo *See* **Toscano, Raffaele, 81e:73052**

Matei, Ion Un problème inverse de la théorie de l'élasticité pour une charge optimum d'une barre élastique supportée par un milieu élastique. **81b:73026**

Mitropoulos, Constantin *See* **Sayir, Mahir, 81h:73029**

Mkrtčjan, A. M. *See* **Babložjan, A. A., 81j:73056**

Okumura, Atsubumi *See* **Amari, Masahiko, 81g:73070**

Parker, D. F. An asymptotic analysis of large deflections and rotations of elastic rods. **81g:73071**

Peiko, F. Schwingungen punktweise belasteter Systeme unter Berücksichtigung der Kopplung verschiedener Wellenarten. I. (French and English summaries) **81k:73036**

Rodzevič, E. G. *See* **Litvinenko, I. N., 81k:73035**

Rogula, D. *See* **Holnicki-Szulc, Jan, 81i:73008** *and* **Holnicki-Szulc, Jan, 81j:73058**

Sakkov, E. *See* **Lepik, Ü., 81j:73059**

Sayir, Mahir (*with* Mitropoulos, Constantin) On elementary theories of linear elastic beams, plates and shells. (German summary) **81h:73029**

Toscano, Raffaele (*with* Maceri, Aldo) On the problem of a beam on a unilateral elastic base. (Italian. English summary) **81e:73052**

Vlehack, Peter The analogy between elastic rods and rigid body motions. II. Linear theory. **81h:73030**

secondary classifications:

Antman, Stuart S. (*with* Rosenfeld, Gerald) Corrections and additions: "Global behavior of buckled states of nonlinearly elastic rods" [SIAM Rev. **20** (1978), no. 3, 513–566; MR **58** #14107]. **(81m:73042)**

Ashanov, G. M. On the question of dynamic stability of an elastic rod. (Russian. Azerbaijani and English summaries) **(81m:73044)**

Beskos, D. E. *See* **Manolis, G. D., (81b:73055)**

Carmichael, D. G. Optimal control in the design of material continua. (Polish and Russian summaries) **(81e:49019)**

Gaeva, E. A. (*with* Kolomíec', V. G.) The construction of an asymptotic expansion of the solution of an integro-partial differential equation with slowly changing parameters. (Russian) **(81a:35013)**

Gáspár, Za. Large deflection analysis of bar structures. (German and Russian summaries) **(81b:73040)**

Gol'denlijuger, S. V. *See* **Leonov, M. Ja.; et al., (81c:73026)**

Haana, S. Y. (*with* Michalopoulos, C. D.) Improved lower bounds for buckling loads and fundamental frequencies of beams. **(81e:73045)**

Kljuinikov, V. D. Singular points of processes of deformation of complex media. **(81g:73065)**

Kolomíec', V. G. *See* **Gaeva, E. A., (81a:35013)**

Kuršin, L. M. (*with* Rastorguev, G. I.) The optimal form of cross section of a torsional rod. (Russian. Armenian and English summaries) **(81g:73090)**

Leonov, M. Ja. (*with* Tjutjukin, G. V.; Gol'denlijuger, S. V.) Longitudinal-lateral bending of an elastoplastic rod. (Russian) **(81c:73026)**

Lepik, Ü. Optimal design of rigid-plastic beams under dynamic loading. (Russian. Estonian and English summaries) **(81f:73044)**

Manolis, G. D. (*with* Beskos, D. E.) Thermally induced vibrations of beam structures. **(81b:73055)**

Michalopoulos, C. D. *See* **Hanna, S. Y., (81e:73045)**

Miller, Robert E. Reduction of the error in eccentric beam modelling. **(81b:73036)**

Parhomovskiĭ, Ja. M. Approximate formulas for elliptic integrals and examples of their application to two problems of nonlinear statics of elastic beams. (Russian) **(81h:33002)**

Pinsky, Peter M. (*with* Taylor, Robert Lee) A finite deformation formulation for elasto/viscoplastic beam structures. **(81g:73086)**

Rastorguev, G. I. *See* **Kuršin, L. M., (81g:73090)**

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Haĭ, M. V. Solution of problems of thermoelasticity for bodies with plane cracks whose contour is described by a second-order curve. (Russian) **(81g:73120)**
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Long, Qi Wei Dislocations, the elastic energy momentum tensor and crack propagation. **(81h:73050)**
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Singh, Brij M. (*with* Dhaliwal, Ranjit S.) Diffraction of antiplane shear waves by two cracks in the presence of a magnetic field. **(81b:73050)**
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Fujita, Tatsu (*with* Mizuta, Atsuo; Tsuda, Osamu) Unstable fracture criterion in a power-law hardening material. (French summary) **(81d:73092)**
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Fujita, Tatsu (*with* Mizuta, Atsuo; Tsuda, Osamu) Unstable fracture criterion in a power-law hardening material. (French summary) **81d:73092**
Mizuta, Atsuo *See* **Fujita, Tatsu; et al., 81d:73092**
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Chang, S. J. Complex *J*-integral and Peach-Koehler equation. **81e:73084**

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Gogija, A. A. ★Численное решение задачи о концентрации напряжений около прямоугольного отверстия в прямоугольных пластинках. (Russian) [Numerical solution of a problem about concentration of stresses around a rectangular aperture in rectangular plates] **(81m:73023)**
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(Mihailov, G. K.) *See* **Theoretical and applied mechanics, (81k:76048)**
Delft ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**
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Theoretical and Applied Mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**
Mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**
Theoretical and applied mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **(81k:76048)**

73Nxx Geophysical solid mechanics [See also 86–XX.]

73N05 Global dynamics

73N10 Earthquake problems

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Cisternas, Armando *See* **Jobert, Georges, (81e:86013)**
Jobert, Georges (*with* Cisternas, Armando) On the inverse problem of local seismic foci. **(81e:86013)**

73N99 None of the above, but in this section

73Pxx Biomechanics of solids

73P05 Mathematical models of biological materials

Chakravarty, S. *See* **Misra, J. C., 81f:73050**
Misra, J. C. (*with* Chakravarty, S.) Study of compressibility in vascular rheology. (German summary) **81f:73050**

73P10 Mechanics response

73P99 None of the above, but in this section

73Q05 Soil mechanics

Litwiniszyn, Jerzy On some interpretation of the discontinuity of displacements in a loose medium. (Russian summary) **81f:73051**
Maceri, Aldo *See* **Toscano, Raffaele, (*See* 81j:68009)**
Toscano, Raffaele (*with* Maceri, Aldo) Preliminary results on the problem of the elastic plate on one-sided foundation. **(*See* 81j:68009)**

secondary classifications:

Ahmadi, G. On mechanics of saturated granular materials. (French and German summaries) **(81h:76055)**
Cowin, S. C. (*with* Leslie, F. M.) On kinetic energy and momenta in Cosserat continua. (German summary) **(81f:73003)**
Desai, C. S. (*with* Phan, H. V.) Three-dimensional finite element analysis including material and geometric nonlinearities. **(81m:73058)**
Katayama, Shoichiro *See* **Nagao, Takaaki, (81k:73049)**
Leslie, F. M. *See* **Cowin, S. C., (81f:73003)**
Nagao, Takaaki (*with* Katayama, Shoichiro) A stress analysis on the compressive behavior of granular materials by the two-dimensional finite element method. **(81k:73049)**
Phan, H. V. *See* **Desai, C. S., (81m:73058)**
Vermeer, P. A. (*with* Verruijt, A.) An accuracy condition for consolidation by finite elements. **(81m:76050)**
Verruijt, A. *See* **Vermeer, P. A., (81m:76050)**

73R05 Electromagnetic elasticity

Ambarcumjan, S. A. On the problem of oscillations of the electroconductive plates in the transverse magnetic field. **81e:73085**
Bhattacharya, Samir K. *See* **Das, N. C., 81e:73087**
Bhattacharyya, S. *See* **Sengupta, Pran Ranjan, 81a:73051**
Chowdhury, K. L. (*with* Glockner, P. G.) Some exact solutions in elastic dielectrics. (Russian summary) **81b:73048**
(*with* Glockner, P. G.) Hyperelastic dielectrics with saturated polarization. (French and German summaries) **81e:73086**
See also **Glockner, P. G., 81a:73049**
Das, N. C. (*with* Bhattacharya, Samir K.) Propagation of discontinuities in coupled magneto-thermo-elastic problems. **81e:73087**
Dhaliwal, Ranjit S. *See* **Singh, Brij M., 81b:73050**
Dikmen, Murat *See* **Erdem, Ali Ünal, 81g:73112**
Erdem, Ali Ünal (*with* Dikmen, Murat) Constitutive equations of nonlocal micromorphic elastic dielectrics. II. (Turkish summary) **81g:73112**
Farat, Karol Asymptotic behaviour of infinite elastic dielectric with Griffith crack in Voigt-Toupin model. (Russian summary) **81a:73048**
Glockner, P. G. (*with* Chowdhury, K. L.) Stress functions for elastic dielectrics. (German and Russian summaries) **81a:73049**
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Gubanov, V. A. Diffraction of surface acoustic waves by a conducting half-plane. **81k:73062**
Iannece, Donatella An energy and stability criterion for a moving dielectric continuum. (Italian) **81a:73050**
Kumagai, Nobuaki *See* **Tsutsumi, Makoto, 81i:73021**
Mahort, F. G. Theory of deformation of polarizable and magnetizable bodies. **81m:73073**
Majewski, Adam (*with* Pelzner, Eugeniusz) Anisotropic dielectric rod with partially metallized surfaces. (Polish. Russian and English summaries) **81j:73077**
Maugin, Gérard A. Nonlinear wave propagation in relativistic continuum mechanics. **81e:73088**
Parkus, H. Magneto- and electrothermoelasticity. **(*See* 80e:73072)**

Pelzner, Eugeniusz *See* **Majewski, Adam, 81j:73077**

Petrov, V. N. (*with* Selezov, I. T.) Solution of a problem on transient waves in a conducting elastic half-space. (Russian) **81g:73113**

Radzikowska, Eugenia Electromagnetic interactions and small elastic deformations of thin dielectric shells. I. General case. (Russian summary) **81e:73089a**

Electromagnetic interactions and small elastic deformations of thin dielectric shells. II. Approximate theories. (Russian summary) **81e:73089b**

Selezov, I. T. *See* **Petrov, V. N., 81g:73113**

Sengupta, Pran Ranjan (*with* Bhattacharyya, S.) On Lamb's problem in a magneto-viscoelastic initially stressed conducting medium. **81a:73051**

Shindo, Y. Singular stresses in a soft ferromagnetic elastic solid with two coplanar Griffith cracks. **81b:73049**

Singh, Brij M. (*with* Dhaliwal, Ranjit S.) Diffraction of antiplane shear waves by two cracks in the presence of a magnetic field. **81b:73050**

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Al'šic, V. I. *See* **Ljubimov, V. N.; et al., (81g:73024)**

Chowdhury, K. L. (*with* Glockner, P. G.) Representations for isotropic thermoelastic dielectrics. (French and German summaries) **(81h:73054)**

Glockner, P. G. *See* **Chowdhury, K. L., (81h:73054)**

Ljubimov, V. N. (*with* Al'šic, V. I.; Lothe, J.) Body waves and quasibody surface waves in a semi-infinite piezoelectric medium. **(81g:73024)**

Lothe, J. *See* **Ljubimov, V. N.; et al., (81g:73024)**

Peleh, B. L. *See* **Vasil'čenko, I. P., (81a:73009)**

Vasil'čenko, I. P. (*with* Peleh, B. L.) ★Основы электромагнитного метода исследования напряжений в анизотропных средах. (Russian) [Foundations of the electromagnetic method of studying stresses in anisotropic media] **(81a:73009)**

73Sxx Micromechanics of solids

73S05 Dislocation theory

Erickson, Ralph O. *See* **Harris, William F., 81b:73051**

Harris, William F. (*with* Erickson, Ralph O.) Tubular arrays of spheres: geometry, continuous and discontinuous contraction, and the role of moving dislocations. **81b:73051**

Long, Qi Wei Dislocations, the elastic energy momentum tensor and crack propagation. **81h:73050**

Markenscoff, Xanthippi The transient motion of a nonuniformly moving dislocation. (French summary) **81d:73093**

Weng, George J. Dislocation theories of work hardening and yield surfaces of single crystals. (German summary) **81g:73114**

secondary classifications:

Chang, S. J. Complex J-integral and Peach-Koehler equation. **(81e:73084)**

73S99 Other micromechanics

Aron, M. Continuous dependence results and a priori estimates in nonlinear micropolar elasticity. **81e:73090**

Chakrabarti, Jayasree *See* **Sengupta, Pran Ranjan, 81c:73054**

Ferrarese, Giorgio Intrinsic formulation of Cosserat continua dynamics. **81c:73053**

Gheorghiță, Vitalie On certain dynamical problems in linear micropolar elasticity. (Romanian summary) **81j:73078**

Markov, K. On the inhomogeneity problem in micropolar elasticity. (Bulgarian and Russian summaries) **81g:73115**

Sengupta, Pran Ranjan (*with* Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. III. Propagation of micropolar elastic waves in infinite elastic space containing cylindrical cavity with co-axial cylindrical shell surrounding cavity. Parts I, II. (Russian summary) **81c:73054**

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Chakrabarti, Jayasree *See* **Sengupta, Pran Ranjan, (81h:73002a)** *and* **Sengupta, Pran Ranjan, (81h:73002b)**

Crăciun, Ion Al. Flexure of micropolar elastic almost cylindrical beams. **(81m:73048)**

Ghosh, Bhabani Charan Solutions of the problem of vertical load distributed sinusoidally on the horizontal surface of a semi-infinite micropolar solid. (Russian summary) **(81k:73007)**

Kondo, Kazuo Constitutional restriction on micromultipolar disturbances. (Japanese summary) **(81m:73013)**

Nunziato, Jace W. (*with* Walsh, Edward K.) On ideal multiphase mixtures with chemical reactions and diffusion. **(81e:73005)**

Sengupta, Pran Ranjan (*with* Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. I. Lamb's problem—line load suddenly applied on a micropolar elastic half-space. I. (Russian summary) **(81h:73002a)**

(*with* Chakrabarti, Jayasree) Some problems of micropolar theory of elasticity. I. Lamb's problem—line load suddenly applied on micropolar elastic half-space. II. (Russian summary) **(81h:73002b)**

Stan, Mihai D. On the equations of motion in a porous, deformable micropolar medium. (Romanian) **(81g:76100)**

Wachecka-Skowron, Anna Uniqueness for anti-plane crack problems in the micropolar theory of elasticity. (Russian summary) **(81i:73020)**

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73T05 Contact problems

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Barquins, Michel *See* **Maugis, Daniel, 81m:73076**

Caillerie, Denis Thin inclusion of high rigidity in an elastic body. (*See* **81j:76091**)

Cui, Jun Zhi On problems of elastic content with initial gaps. (Chinese. English summary) **81j:73079**

Duvaut, Georges Équilibre d'un solide élastique avec contact unilatéral et frottement de Coulomb. (English summary) **81h:73051**

Džagmaidze, A. Ja. *See* **Natrošvili, D. G.; et al., 81j:73080**

Džavahišvili, G. I. Effective solution of boundary value and boundary contact problems of the two-dimensional moment theory of thermoelasticity for certain domains. (Russian. Georgian and English summaries) **81m:73074**

Gačečiladze, R. I. Contact boundary problems of the dynamics of the moment theory of elasticity for inhomogeneous anisotropic elastic media. (Russian. Georgian and English summaries) **81c:73055**

Contact boundary problems of the dynamics of the theory of elasticity for anisotropic inhomogeneous elastic media. (Russian. Georgian and English summaries) **81d:73094**

Gecit, M. R. A tensionless contact without friction between an elastic layer and an elastic foundation. **81h:73052**

Gol'dštein, R. V. (*with* Spektor, A. A.) Variational estimates of the solutions of some mixed three-dimensional problems of elasticity theory with unknown boundary. **81d:73095**

Haslinger, Jaroslav (*with* Hlaváček, Ivan) Contact between elastic bodies. I. Continuous problems. (Czech summary) **81m:73075**

Hlaváček, Ivan *See* **Haslinger, Jaroslav, 81m:73075**

Katamadze, R. G. A new contact problem of the theory of elasticity. (Russian. Georgian and English summaries) **81g:73116**

Kerčman, V. I. Variational problems for determining the contact platform of elastic bodies. (Russian) **81b:73053**

Kikuchi, Noboru Beam bending problems on a Pasternak foundation using reciprocal variational inequalities. **81h:73052**

Kudiš, I. I. On the asymptotic solution of an axially symmetric contact problem with account taken of the surface structure of the contact bodies. (Russian) **81a:73052**

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Maziašvili, I. G. Functional equation of a boundary-contact problem of statics of the moment theory of elasticity. (Russian. Georgian and English summaries) **81g:73118**

Mirzabekjan, B. Ju. Generalization of the Prandtl problem of indentation of a die to the case of force eccentricity. **81d:73096**

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Natrošvili, D. G. (*with* Džagmaidze, A. Ja.; Svanadze, M. Ž.) ★Решение некоторых граничноконтактных задач теории упругости. (Russian) [Solution of some boundary-contact problems of the theory of elasticity] **81j:73080**

Naumova, N. M. (*with* Atabekov, I. U.) Contact problem for a ring supported by a shell. (Russian) **81m:73077**

Peleh, B. L. (*with* Suhorol'skiĭ, M. A.) ★Контактные задачи теории упругих анизотропных оболочек. (Russian) [Contact problems of the theory of elastic anisotropic shells] **81d:73097**

Popov, G. Ja. (*with* Tolkačev, V. M.) Problem of contact between rigid bodies and thin-walled elements. **81m:73078**

Procenko, V. S. Bending of a system of strip plates lying on an elastic half-space. **81h:73053**

Selvadurai, A. P. S. On the displacement induced in a rigid circular punch on an elastic halfspace due to an external force. **81k:73063**

Šmatkova, A. A. Dynamic contact problems that occur when a die moves along the boundary of a viscoelastic half-space. **81c:73056**

Spektor, A. A. *See* **Gol'dštein, R. V., 81d:73095**

Suhorol'skiĭ, M. A. *See* **Peleh, B. L., 81d:73097**

Švabjuk, V. I. Effect of compressibility of the normal in contact problems for transversely isotropic slabs. **81k:73064**

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Teplyĭ, M. I. Determination of the stress in a circular ring compressed by two presses. **81m:73079**

Tiersten, H. F. A theory of interpenetrating solid continua and some applications. (*See* **80m:73002**)

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Turner, J. R. The frictional unloading problem on an elastic half-space. **81d:73098**

The frictional unloading problem on a linear elastic half-space. **81e:73092**

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Hussain, M. A. (*with* Pu, S. L.) Exact solution of coupled pairs of dual trigonometric series. **(81b:45007)**

Maceri, Aldo *See* **Toscano, Raffaele, (81k:73045)**

Panasenko, G. P. Higher-order asymptotics of the solutions of problems on the contact of periodic structures. (Russian) **(81f:35018)**

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Rylming, I. L. On temperature and heat source distributions in sliding contact problems. (German summary) **(81e:80011)**

(Ševljakov, Ju. A.) *See* **Interaction in the mechanics of constructions, (81m:73007)**

Toscano, Raffaele (*with* Maceri, Aldo) A problem of contact through membranes. (Italian. French summary) **(81k:73045)**

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конструкций. (Russian) [Interaction in the mechanics of constructions] **(81m:73007)**

Mechanics ★Взаимодействие в механике конструкций. (Russian) [Interaction in the mechanics of constructions] **(81m:73007)**

73U05 Thermomechanics of solids [See also 73B30.]

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Araki, Hidekazu (*with* Shioya, Shunsuke; Matsuda, Mitsumasa) On the thermal stresses of an infinite plate with an infinite row of circular inclusions under uniform heat flow. **81f:73052**

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Basilašvili, M. V. Fundamental potentials of the two-dimensional theory of elastothermodiffusion and their boundary and differential properties. (Russian. Georgian and English summaries) **81f:73053**

Berezovskaja, L. M. The temperature field of an asymmetrically heated thin cylindrical shell. (Russian) **81e:73093**

Berković, Mladen Linearized equations of the coupled thermomechanical general membrane problem in the finite element method. (Russian and Serbo-Croatian summaries) **81k:73065**

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Davis, Julian (*with* Chen, Yu) Thermoelastic stresses in gun barrels. **81a:73053**

Demiray, Hilmi A continuum theory of thermoelastic solids with diatomic structure. **81a:73054**

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Gordon, V. A. (*with* Kolčin, G. B.) The method of phase integrals in a thermoelasticity problem for an inhomogeneous cylinder. (Russian. Armenian and English summaries) **81k:73055**

Gröger, Konrad (*with* Hünlich, Rolf) An existence-uniqueness result for some models of thermoplasticity. **81g:73119**

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Haĭ, M. V. Solution of problems of thermoelasticity for bodies with plane cracks whose contour is described by a second-order curve. (Russian) **81g:73120**
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Haouza, F. On the solution of the first basic problem of infinite elastic homogeneous region of the theory of thermoelasticity. (Arabic summary) **81a:73055**

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Jarić, Jovo P. (*with* Martinović, Milivoje) Conservation laws in linear thermoelasticity. (Russian summary) **81d:73102**
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Jentsch, Lothar Zur Theorie der Wärmespannungen in Bimetallkörpern. **81h:73057**

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Kibal'nikova, S. I. (*with* Martinovič, T. L.) Solution of the plane problem of static thermoelasticity for an anisotropic solid with a cavity, when there is convective heat exchange with the environment. **81f:73056**

Kit, G. S. (*with* Haĭ, M. V.) Application of harmonic and thermal potentials to the solution of quasistatic problems of thermoelasticity for a body with a plane crack. (Russian) **81g:73121**

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Lenjuk, M. P. (*with* Lakusta, K. V.) Stressed state of a two-layered space. (Russian) **81e:73059**
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Michel, Bernd Energy of thermoelastic inclusions in a semi-infinite solid. (Russian summary) **81b:73056**

Mokrik, R. Ĭ. (*with* Pir'ev, Ju. O.) Dynamical properties of the solutions of problems of thermoelasticity. (Russian. English summary) **81f:73057**

Morro, A. Wave propagation in thermoviscous materials with hidden variables. (Polish and Russian summaries) **81g:73123**

Motovilovec, I. A. (*with* Novikova, A. M.; Ševčenko, S. I.) Heat-stressed state of a rectangular plate under the action of a multistage heat source. (Russian) **81g:73124**

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Vlasov, N. M. (*with* Egorov, V. S.; Kolesov, V. S.; Fedik, I. I.) Analogy of a two-dimensional problem of thermoelasticity with plate flexion (a survey). (Russian) **81m:73083**

Wadhawan, M. C. Steady-state thermoelastic response of an infinite slab. **81d:73103**

Wilkes, N. S. Continuous dependence and instability in linear thermoelasticity. **81d:73104**

Woźniak, Czesław On the thermoelasticity of non-linear discrete and continuous constrained systems. (*See* **80e:73072**)

secondary classifications:

Bhattacharya, Samir K. *See* **Das, N. C., (81e:73087)**

Chadwick, Paul Thermomechanics of rubberlike materials. (Polish) (*See* **81f:73001**)

Das, N. C. (*with* Bhattacharya, Samir K.) Propagation of discontinuities in coupled magneto-thermo-elastic problems. **(81e:73087)**

Dzavahišvili, G. I. Effective solution of boundary value and boundary contact problems of the two-dimensional moment theory of thermoelasticity for certain domains. (Russian. Georgian and English summaries) **(81m:73074)**

Halphen, Bernard L'adaptation partielle des structures élastoplastiques ou viscoplastiques. (English summary) **(81m:73035)**

Iannece, Donatella An energy and stability criterion for a moving dielectric continuum. (Italian) **(81a:73050)**

(Ignaczak, Józef) *See* **Problems of the thermomechanics of elastic bodies, (81f:73001)**

Kupradze, V. D. On dynamic and related problems of elasticity. **(81e:73017)**

Lu, K. U. Dynamics of differential rotating sphere—earthquake and continental drift. (*See* **81i:90005**)

Nowacki, Witold Thermal stresses in anisotropic bodies. (*See* **80e:73072**)

Shail, R. Orthogonal polynomial solutions to some mixed boundary value problems in elasticity. III. **(81k:73060)**

Trzęsowski, Andrzej The size effect. I. Thermodynamical model. (Russian summary) **(81h:73004a)**
The size effect. II. Model of dynamics. (Russian summary) **(81h:73004b)**

Val'kovskaja, V. I. Quasistatic oscillations of a circular plate in a stochastic temperature

field. (Russian) **(81m:73019)**

Elastic bodies ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] **(81f:73001)**

Problems of the thermomechanics of elastic bodies ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] **(81f:73001)**

Thermomechanics ★Zagadnienia termomechaniki ciał sprężystych. (Polish) [Problems of the thermomechanics of elastic bodies] **(81f:73001)**

76-XX FLUID MECHANICS {For general continuum mechanics, see 73Bxx, or other parts of 73–XX.}

76–01 Elementary exposition, textbooks

Fox, Robert W. (*with* McDonald, Alan T.) ★Introduction to fluid mechanics. **81b:76001**

McDonald, Alan T. *See* **Fox, Robert W., 81b:76001**

secondary classifications:

Spencer, A. J. M. ★Continuum mechanics. **(81k:73001)**

76–02 Advanced exposition (research surveys, monographs, etc.)

Chorin, Alexandre Joel (*with* Marsden, Jerrold E.) ★A mathematical introduction to fluid mechanics. **81m:76001**

Chu, C. K. Numerical methods in fluid dynamics. **81e:76001**
Computational fluid dynamics. **81a:76002**

Kotljar, L. M. *See* **Kuselev, O. M., 81d:76001**

Kuselev, O. M. (*with* Kotljar, L. M.) ★Нелинейные задачи теории струйных течений тяжелой жидкости. (Russian) [Nonlinear problems in the theory of stream flows of a heavy fluid] **81d:76001**

(Lumley, John L.) *See* **Annual review of fluid mechanics, 81a:76001**

Marsden, Jerrold E. *See* **Chorin, Alexandre Joel, 81m:76001**

(Van Dyke, Milton) *See* **Annual review of fluid mechanics, 81a:76001**

(Wehausen, J. V.) *See* **Annual review of fluid mechanics, 81a:76001**

Yih, Chia Shun ★Stratified flows. **81b:76002**

Annual review of fluid mechanics ★Annual review of fluid mechanics. Vol. 12. **81a:76001**

Fluid mechanics ★Annual review of fluid mechanics. Vol. 12. **81a:76001**

secondary classifications:

Gorikov, A. G. Interaction of shock waves with deformable obstacles. (Russian) **(81m:73003)**

Graffi, Dario ★Nonlinear partial differential equations in physical problems. **(81k:35002)**

Whitham, G. B. ★Lectures on wave propagation. **(81i:76010)**

76–03 Historical (must also be assigned at least one classification number from Section 01)

secondary classifications:

Janouch, F. ★Lev D. Landau: his life and work. **(81f:01031)**

Lamb, Horace ★A profile of Horace Lamb. **(81f:01017)**

(Landau, Lev D.) *See* **Janouch, F., (81f:01031)**

(Radok, R.) *See* **Lamb, Horace, (81f:01017)**

(Radok, S.) *See* **Lamb, Horace, (81f:01017)**

Bibliography:
Landau, Lev D. *See* **Janouch, F., (81f:01031)**

Biography:
Landau, Lev D. *See* **Janouch, F., (81f:01031)**

76–04 Explicit machine computation and programs (not the theory of computation or programming)

Barnett, A. G. A direct macroscopic relativistic approach to the numerical simulation of dynamic systems. (*See* **81a:76005**)

Browne, L. W. B. The marker and cell technique. (*See* **81a:76005**)

Fix, George J. Hybrid finite element methods. (*See* **81a:76005**)

Fletcher, C. A. J. The Galerkin method: an introduction. (*See* **81a:76005**)

Morrison, W. R. B. (*with* Smith, P. Arnot) A practical application of a network model. (*See* **81a:76005**)

Noye, B. J. An introduction to finite difference techniques. (*See* **81a:76005**)

Pearson, R. A. (*with* Williams, P. G.) Dependence of numerical results on truncation errors. (*See* **81a:76005**)
Comparison between methods—a review. (*See* **81a:76005**)

Smith, P. Arnot *See* **Morrison, W. R. B., (*See* 81a:76005)**

Steven, G. P. On the application of the finite element method to problems in fluid flow. (*See* **81a:76005**)

Williams, P. G. *See* **Pearson, R. A., (*See* 81a:76005)**

Computational methods in nonlinear fluid mechanics ★Special issue: computational methods in nonlinear fluid mechanics. **81d:76002**

Computers in aerodynamics ★Special issue: computers in aerodynamics. **81d:76003**

Nonlinear fluid mechanics ★Special issue: computational methods in nonlinear fluid mechanics. **81d:76002**

Special issue:
Computational methods in nonlinear fluid mechanics ★Special issue: computational methods in nonlinear fluid mechanics. **81d:76002**
Computers in aerodynamics ★Special issue: computers in aerodynamics. **81d:76003**

secondary classifications:

Batra, R. L. (*with* Koshy, K.) Numerical solution of three-dimensional entrance flow of a Bingham material through noncircular ducts. **(81k:76002)**

Brandt, Achi (*with* Dendy, J. E., Jr.; Ruppel, Hans) The multigrid method for semi-implicit hydrodynamics codes. **(81g:76079)**

Čeremisin, F. G. *See* **Rykov, V. A.; et al., (81k:76054)**

Dendy, J. E., Jr. *See* **Brandt, Achi; et al., (81g:76079)**

Koshy, K. *See* **Batra, R. L., (81k:76002)**

Ruppel, Hans *See* **Brandt, Achi; et al., (81g:76079)**

Rykov, V. A. (*with* Čeremisin, F. G.; Šahov, E. M.) Numerical investigations in rarefied gas dynamics. (Russian) **(81k:76054)**

Šahov, E. M. *See* **Rykov, V. A.; et al., (81k:76054)**

76–05 Experimental papers

76–06 Proceedings, conferences, etc.

(Faizullaev, D. F.) *See* **Motion of single- and multiphase media, 81m:76002**

(Hughes, Thomas J. R.) *See* **Finite element methods for convection dominated flows, 81c:76001**

(Krauklis, P. V.) *See* **Interference waves in layered media, 81k:76001**

(Miller, John J. H.) *See* **Boundary and interior layers—computational and asymptotic methods, 81j:76001**

(Molotkov, L. A.) *See* **Interference waves in layered media, 81k:76001**

(Morgan, K.) *See* **Recent advances in numerical methods in fluids, 81j:76002**

(Noye, John) *See* **Numerical simulation of fluid motion, 81a:76005**

(Ol'ievskiĭ, V. V.) *See* **Proceedings: All-Union School-Seminar on Statistical Hydroacoustics, 81a:00010**

(Rautmann, Reimund) *See* **Approximation methods for Navier-Stokes problems, 81a:76004**

(Taylor, C.) *See* **Recent advances in numerical methods in fluids, 81j:76002**

(Yih, Chia Shun) *See* **Advances in applied mechanics, 81a:76003**

(Zagorulko, N. G.) *See* **Proceedings: All-Union School-Seminar on Statistical Hydroacoustics, 81a:00010**

Advances in applied mechanics ★Advances in applied mechanics. Vol. 18. **81a:76003**

All-Union School-Seminar:
Statistical Hydroacoustics ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] **81a:00010**

All-Union Seminar:
Turbulent Flows ★Third All-Union Seminar on Turbulent Flows. Part I. **81d:76004**
★Third All-Union Seminar on Turbulent Flows. Part II. **81d:76005**

Applied mechanics ★Advances in applied mechanics. Vol. 18. **81a:76003**

Approximation methods for Navier-Stokes problems ★Approximation methods for Navier-Stokes problems. **81a:76004**

Boundary and interior layers—computational and asymptotic methods ★Boundary and interior layers—computational and asymptotic methods. **81j:76001**

Conference:
Boundary and Interior Layers—Computational and Asymptotic Methods ★Boundary and interior layers—computational and asymptotic methods. **81j:76001**
Numerical Simulation of Fluid Dynamic Systems ★Numerical simulation of fluid motion. **81a:76005**

Convection dominated flows ★Finite element methods for convection dominated flows. **81c:76001**

Dublin ★Boundary and interior layers—computational and asymptotic methods. **81j:76001**

Finite element methods for convection dominated flows ★Finite element methods for convection dominated flows. **81c:76001**

Fluid dynamic systems ★Numerical simulation of fluid motion. **81a:76005**

Fluid motion ★Numerical simulation of fluid motion. **81a:76005**

Interference waves in layered media ★Интерференционные волны в слоистых средах. I. (Russian) [Interference waves in layered media. I] **81k:76001**

L'vov ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] **81a:00010**

Meeting:
American Society of Mechanical Engineering ★Finite element methods for convection dominated flows. **81c:76001**

Melbourne ★Numerical simulation of fluid motion. **81a:76005**

Motion of single- and multiphase media ★Движение одно- и многофазных сред. (Russian) [Motion of single- and multiphase media] **81m:76002**

Navier-Stokes problems ★Approximation methods for Navier-Stokes problems. **81a:76004**

New York ★Finite element methods for convection dominated flows. **81c:76001**

Numerical simulation of fluid motion ★Numerical simulation of fluid motion. **81a:76005**

Paderborn ★Approximation methods for Navier-Stokes problems. **81a:76004**

Proceedings:
All-Union School-Seminar on Statistical Hydroacoustics ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] **81a:00010**

Recent advances in numerical methods in fluids ★Recent advances in numerical methods in fluids. Vol. 1. **81j:76002**

Statistical hydroacoustics ★Труды седьмой Всесоюзной школы-семинара по статистической гидроакустике. (Russian) [Proceedings of the Seventh All-Union School-Seminar on Statistical Hydroacoustics] **81a:00010**

Symposium:
Approximation Methods for Navier-Stokes Problems ★Approximation methods for

Navier-Stokes problems. **81a:76004**

Turbulent flows ★Third All-Union Seminar on Turbulent Flows. Part I. **81d:76004**
★Third All-Union Seminar on Turbulent Flows. Part II. **81d:76005**

Zvenigorod ★Third All-Union Seminar on Turbulent Flows. Part I. **81d:76004**
★Third All-Union Seminar on Turbulent Flows. Part II. **81d:76005**

secondary classifications:

(Boiti, M.) *See* **Nonlinear evolution equations and dynamical systems, (81f:35004)**
(Glowinski, Roland) *See* **Computing methods in applied sciences and engineering, (81h:65001)**
(Harris, C. J.) *See* **Mathematical modelling of turbulent diffusion in the environment, (81j:76051)**
(Lions, Jacques-Louis) *See* **Computing methods in applied sciences and engineering, (81h:65001)**
(Nikolaevskiĭ, V. N.) *See* **Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices, (81e:76018)**
(Pančenkov, A. M.) *See* **Asymptotic methods in systems theory, (81f:93001)**
(Pempinelli, F.) *See* **Nonlinear evolution equations and dynamical systems, (81f:35004)**
(Pisarenko, G. S.) *See* **Current problems in theoretical and applied mechanics, (81b:70001)**
(Soliani, G.) *See* **Nonlinear evolution equations and dynamical systems, (81f:35004)**
(Stepanov, G. Ju.) *See* **Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices, (81e:76018)**

All-Union Congress:
Theoretical and Applied Mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**

Asymptotic methods in systems theory ★Асимптотические методы в теории систем. Вып. 9. (Russian) [Asymptotic methods in systems theory. No. 9] **(81f:93001)**

Computing methods in applied sciences and engineering ★Computing methods in applied sciences and engineering. **(81h:65001)**

Conference:
Mathematical Modelling of Turbulent Diffusion in the Environment ★Mathematical modelling of turbulent diffusion in the environment. **(81j:76051)**

Current problems in theoretical and applied mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**

Dynamical systems ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**

Free vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

Kiev ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**

Lecce ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**

Liverpool ★Mathematical modelling of turbulent diffusion in the environment. **(81j:76051)**

Mathematical modelling of turbulent diffusion in the environment ★Mathematical modelling of turbulent diffusion in the environment. **(81j:76051)**

Mechanics ★Современные проблемы теоретической и прикладной механики. (Russian) [Current problems in theoretical and applied mechanics] **(81b:70001)**

Meeting:
Nonlinear Evolution Equations and Dynamical Systems ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**

Modeling ★Mathematical modelling of turbulent diffusion in the environment. **(81j:76051)**

Nonlinear evolution equations and dynamical systems ★Nonlinear evolution equations and dynamical systems. **(81f:35004)**

Quantum vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

Stability and separation of a boundary layer ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

Symposium:
Computing Methods in Applied Sciences and Engineering ★Computing methods in applied sciences and engineering. **(81h:65001)**

Systems theory ★Асимптотические методы в теории систем. Вып. 9. (Russian) [Asymptotic methods in systems theory. No. 9] **(81f:93001)**

Versailles ★Computing methods in applied sciences and engineering. **(81h:65001)**

Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

76Axx Foundations, constitutive equations, rheology [See also 35L65.]

76A02 Foundations

Bampi, Franco (*with* Morro, A.) Viscous fluids with hidden variables and hyperbolic systems. **81d:76006**
Morro, A. *See* **Bampi, Franco, 81d:76006**
Porter, D. *See* **Sewell, Michael J., 81j:76003**
Sewell, Michael J. (*with* Porter, D.) Constitutive surfaces in fluid mechanics. **81j:76003**

secondary classifications:

Eiseman, P. R. (*with* Stone, Alexander P.) Conservation laws of fluid dynamics—a survey. **(81f:35076)**
Grecos, A. P. *See* **Theodosopulu, M., (81h:82057)**
Stone, Alexander P. *See* **Eiseman, P. R., (81f:35076)**
Theodosopulu, M. (*with* Grecos, A. P.) Linear transport equations for classical fluids. **(81h:82057)**

76A05 Non-Newtonian fluids

Akbay, U. Über den Einfluß der veränderlichen Viskosität auf die Stabilität der ebenen Kanalströmung. (English summary) **81d:76007**
Batra, R. L. (*with* Koshy, K.) Numerical solution of three-dimensional entrance flow of a Bingham material through noncircular ducts. **81k:76002**
On the flow of a non-Newtonian liquid in a curved pipe. **81f:76001**
Bercovier, Michel (*with* Engelman, Michael) A finite element method for incompressible non-Newtonian flows. **81i:76001**
Bürger, W. Zum Materialverhalten einfacher Fluide in periodischen Strömungen. **81h:76001**
Callegari, A. *See* **Nachman, Arje, 81e:76003**
Chiam, T. C. *See* **Unsworth, K., 81f:76002**
Christensen, R. M. *See* **Garcia-Franco, C. A., 81e:76002**
Devanathan, R. *See* **Ramkissoon, H., 81e:76005**
Engelman, Michael *See* **Bercovier, Michel, 81i:76001**
Garcia-Franco, C. A. (*with* Christensen, R. M.) Non-Newtonian behavior of suspensions. (German summary) **81e:76002**
Hutter, Kolumban Surface waves in a non-Newtonian incompressible liquid film. (German summary) **81b:76003**
Kaloni, P. N. *See* **Kamel, M. T., 81k:76003**
Kamel, M. T. (*with* Kaloni, P. N.) Two-dimensional internal flows of polar fluids. **81k:76003**
Koshy, K. *See* **Batra, R. L., 81k:76002**
Lumley, John L. Two-phase and non-Newtonian flows. (*See* **80d:76044**)
Mathur, M. N. *See* **Ramachandran, P. Subhadra, 81d:76008**
Mir-Mohamad-Sadegh, A. (*with* Rajagopal, K. R.) The flow of a non-Newtonian fluid past projections and depressions. **81g:76001**
Nachman, Arje (*with* Callegari, A.) A nonlinear singular boundary value problem in the theory of pseudoplastic fluids. **81e:76003**
Naumann, Joachim (*with* Wulst, Michael) On evolution inequalities of Bingham type in three dimensions. II. **81c:76002**
Onuki, Akira Non-Newtonian effect and long-range correlation in shear flow in two dimensions. **81g:76002**
Oskolkov, A. P. On the theory of Voight fluids. (Russian) **81i:76002**
Padula, Mariarosaria *See* **Russo, Remigio, 81c:76003**
Rajagopal, K. R. *See* **Mir-Mohamad-Sadegh, A., 81g:76001**
Ramachandran, P. Subhadra (*with* Mathur, M. N.) Heat transfer in the stagnation point flow of a micropolar fluid. (German summary) **81d:76008**
Ramkissoon, H. Integral representations in couple stress theory of fluids. (German and Russian summaries) **81e:76004**
(*with* Devanathan, R.) Drag invariance in microcontinuum fluid mechanics. **81e:76005**
On the uniqueness and existence of Stokes flows in micropolar fluid theory. (German summary) **81h:76002**
Rivlin, Ronald S. The mechanics of non-Newtonian fluids. **81b:76004**
Russo, Remigio (*with* Padula, Mariarosaria) A note on the bifurcation of micropolar fluid motions. (Italian summary) **81c:76003**
Shima, A. (*with* Tsujino, T.) The behavior of bubbles in a Ellis fluid. **81k:76004**
(*with* Tsujino, T.) The behavior of bubbles in a Carreau model fluid. **81k:76005**
Singh, D. V. *See* **Verma, P. D. S.; et al., 81h:76003**
Singh, K. *See* **Verma, P. D. S.; et al., 81h:76003**
Tsujino, T. *See* **Shima, A., 81k:76004** *and* **Shima, A., 81k:76005**
Unsworth, K. (*with* Chiam, T. C.) Heat transfer from nonisothermal surfaces in the stagnation-point flow of a micropolar fluid. (German summary) **81f:76002**
Verma, P. D. S. (*with* Singh, D. V.; Singh, K.) Couette flow of microthermopolar fluids between concentric rotating cylinders. **81h:76003**
Wulst, Michael On a nonlinear evolution problem arising in the theory of pseudoplastic fluids. (Italian summary) **81i:76003**
See also **Naumann, Joachim, 81c:76002**

secondary classifications:

Bercovier, Michel Approximation of Bingham's variational inequalities by a penalty function for the incompressibility constraint. **(81m:49038)**
Brown, Billings *See* **Coon, Nancy; et al., (81i:80009)**
Camenschi, G. (*with* Şandru, N.) Inertia influence in strip drawing problem. **(81d:73034)**
Coon, Nancy (*with* Ma, Shao Mu; Redington, Patrick K.; Brown, Billings; Eyring, Henry) A theory of distortion of the reaction zone. **(81i:80009)**
Eyring, Henry *See* **Coon, Nancy; et al., (81i:80009)**
Ma, Shao Mu *See* **Coon, Nancy; et al., (81i:80009)**
Mochimaru, Yoshihiro (*with* Tomita, Yukio) A numerical method for the solution of nonlinear equations with a number of variations. **(81j:65118)**
Ovčinnikov, V. A. (*with* Pavlov, V. G.) Hydrodynamic stability of incompressible boundary layers with variable viscosity. **(81g:76062)**
Pavlov, V. G. *See* **Ovčinnikov, V. A., (81g:76062)**
Rao, S. K. Lakshmana Cosserat fluid motions. **(81g:76061)**
Redington, Patrick K. *See* **Coon, Nancy; et al., (81i:80009)**
Şandru, N. *See* **Camenschi, G., (81d:73034)**
Sul'man, Z. P. *See* **Volčenok, V. F., (81k:80003)**

Tomita, Yukio *See* **Mochimaru, Yoshihiro, (81j:65118)**

Volčenok, V. F. (*with* Šul'man, Z. P.) Convective dissipative heat exchange in generalized Couette flow of a nonlinearly viscoplastic liquid. **(81k:80003)**

76A10 Viscoelastic fluids

Adams, Fred T. *See* **Chang, Ping Wu; et al., (***See* **81j:76002)**

Akbay, U. (*with* Becker, Ernst; Krozer, S.; Sponagel, S.) Instability of slow viscometric flow. **81d:76009**

Becker, Ernst *See* **Akbay, U.; et al., 81d:76009**

Chang, Ping Wu (*with* Patten, Thomas W.; Finlayson, Bruce A.) Collocation and Galerkin finite element methods for viscoelastic fluid flow. I. Description of method and problems with fixed geometry. **81e:76006**

(*with* Patten, Thomas W.; Adams, Fred T.; Finlayson, Bruce A.) Galerkin and collocation finite element methods for Newtonian and viscoelastic fluids. (*See* **81j:76002)**

Finlayson, Bruce A. *See* **Chang, Ping Wu; et al., 81e:76006** *and* **Chang, Ping Wu; et al., (***See* **81j:76002)**

Fosdick, R. L. (*with* Rajagopal, K. R.) Thermodynamics and stability of fluids of third grade. **81c:76004**

Hong, S. H. *See* **Wilhelm, H. E., 81g:76003**

Joseph, Daniel D. Some inequalities in the theory of simple fluids. **81f:76003**

Krozer, S. *See* **Akbay, U.; et al., 81d:76009**

Mir-Mohamad-Sadegh, A. *See* **Rajagopal, K. R., 81k:76006**

Mishra, Shankar Prasad (*with* Mohapatra, Umakanta) Oscillatory free convection flow of elastico-viscous liquid from a vertical plate. **81h:76004**

Mohapatra, Umakanta *See* **Mishra, Shankar Prasad, 81h:76004**

Patten, Thomas W. *See* **Chang, Ping Wu; et al., 81e:76006** *and* **Chang, Ping Wu; et al., (***See* **81j:76002)**

Peer, G. Oscillating flow in a tube with formation of a boundary layer of solvent. **81i:76004**

Phan-Thien, N. Flow enhancement mechanisms of a pulsating flow of non-Newtonian liquids. (German summary) **81f:76004**

Rajagopal, K. R. (*with* Mir-Mohamad-Sadegh, A.) A boundary integral approach for determining the pressure error. **81k:76006**

See also **Fosdick, R. L., 81c:76004**

Sponagel, S. *See* **Akbay, U.; et al., 81d:76009**

Wilhelm, H. E. (*with* Hong, S. H.) Stress relaxation waves in fluids. **81g:76003**

Zaborski, S. Unsteady shearing flows and plane shear waves in simple fluids. (Polish and Russian summaries) **81k:76007**

secondary classifications:

Bhattacharyya, S. K. *See* **Sengupta, Pran Ranjan, (81d:76109)**

Entov, V. M. (*with* Kestenboim, H. S.; Rožkov, A. N.; Šarčevič, L. I.) Dynamic equilibrium shape of a film of viscous or viscoelastic liquid. **(81j:76031)**

Jarin, A. L. Stability of a jet of viscoelastic liquid in the presence of a mass flux at its surface. **(81d:76055)**

Kestenboim, H. S. *See* **Entov, V. M.; et al., (81j:76031)**

Rožkov, A. N. *See* **Entov, V. M.; et al., (81j:76031)**

Šarčevič, L. I. *See* **Entov, V. M.; et al., (81j:76031)**

Sengupta, Pran Ranjan (*with* Bhattacharyya, S. K.) Hydromagnetic flow of two immiscible viscoelastic Maxwell fluids through a nonconducting rectangular channel. **(81d:76109)**

Slemrod, M. Unstable viscoelastic fluid flows. **(81f:76025)**

Stability of steady shearing flows subject to large shearing perturbations in a nonlinear viscoelastic fluid. **(81f:76026)**

Nonlinear evolution equations ★Studies on some nonlinear evolution equations. **(81i:35003)**

Studies on some nonlinear evolution equations ★Studies on some nonlinear evolution equations. **(81i:35003)**

76A60 Computational methods

76A99 None of the above, but in this section

Chiroiu, Veturia Nonlocal theory of capillarity. **81c:76005**

Demiray, Hilmi A nonlocal theory for nematic liquid crystals. (Polish and Russian summaries) **81j:76004**

76Bxx Incompressible inviscid fluids, potential theory

secondary classifications:

García-Moliner, F. *See* **Velasco, V. R., (81g:73030)**

Kotljar, L. M. *See* **Kuselev, O. M., (81d:76001)**

Kuselev, O. M. (*with* Kotljar, L. M.) ★Нелинейные задачи теории струйных течений тяжелой жидкости. (Russian) [Nonlinear problems in the theory of stream flows of a heavy fluid] **(81d:76001)**

Velasco, V. R. (*with* García-Moliner, F.) Surface effects in elastic surface waves. **(81g:73030)**

76B05 Airfoil theory

Arioli, M. Numerical analysis of a variational inequality connected with the motion of a fluid past an obstacle. (Italian. English summary) **81f:76005**

Diogenov, A. V. Study of the motion of an airfoil at a variable distance from a bearing surface. (Russian) **81i:76005**

Klunowska, Maria E. *See* **Prosnak, Włodzimierz J., 81a:76007**

Labrujère, Th. E. Integral equation methods for multi-element airfoil analysis and design. **81e:76007**

Legendre, Robert Vibrations de plusieurs obstacles au sein de l'écoulement plan d'un fluide incompressible. (English summary) **81b:76005**

Nowak, Miron A simplified method of integrating the equation of the lifting surface and its connection with a certain system of lifting lines. (Russian summary) **81a:76006**

Nugmanov, Z. H. Method for calculating surface velocity of arbitrary wing in ideal fluid. **81g:76004**

Pavlovec, G. A. Potential flow around a profile with a trailing edge of finite thickness. (Russian) **81j:76005**

Petrila, Titus Une méthode pour le calcul de l'influence des parois sur l'écoulement fluide plan. **81g:76005**

Prosnak, Włodzimierz J. The theory of the design problem for multiplanes. (Russian summary) **81b:76006**

(*with* Klonowska, Maria E.) Unsteady potential flow around an arbitrary system of profiles. (Russian summary) **81a:76007**

Seiranjan, A. P. The problem of minimization of the weight of an airfoil with reverse sweepback with a constraint on the rate of divergence. (Russian) **81h:76005**

Shirakura, Masaaki Conformal transformation of row of flat-plates into row of circular cylinders. **81g:76006**

Šlaustas, R. Ju. A thin supporting surface of arbitrary elongation in an aperiodic flow around a bearing surface. (Russian) **81j:76006**

Stepanov, G. Ju. The basic models of mechanics of liquids and gases in the theory of the wing. **81m:76003**

Tuck, E. O. A nonlinear unsteady one-dimensional theory for wings in extreme ground effect. **81d:76010**

Vučkova, I. V. Investigation of an integral expression for determining the absolute flow velocity in the cascade region. (Bulgarian. Russian and English summaries) **81f:76006**

White, James W. A nonmapped complex variable method for the computation of unseparated airfoil flows. **81i:76006**

Zubov, V. I. On a question of the optimal profile of an air foil in a flow of an ideal incompressible fluid. (Russian) **81b:76007**

secondary classifications:

Chi, M. R. Lifting and nonlifting kernel functions for cascade and isolated airfoils. **(81h:76032)**

Fromme, Joseph A. (*with* Golberg, Michael A.) Numerical solution of a class of integral equations arising in two-dimensional aerodynamics. **(81a:65120)**

(*with* Golberg, Michael A.) Numerical solution of a class of integral equations arising in two-dimensional aerodynamics—the problem of flaps. **(81a:65121)**

Golberg, Michael A. *See* **Fromme, Joseph A., (81a:65120)** *and* **Fromme, Joseph A., (81a:65121)**

Loginov, B. V. The problem of airfoil divergence as an example of the theory of branching of solutions of nonlinear equations with two small parameters. (Russian) **(81k:73033)**

76B10 Jets and cavities, cavitation, free-streamline theory, water-entry problems, hydrofoil theory

Baĭarova, V. N. (*with* Serebrjakov, V. V.) Analysis of a vertical axisymmetric cavitating flow around a body. **81c:76006**

Bulvol, V. M. *See* **Logvinovič, G. L., 81c:76008**

Chaissé, F. *See* **Servas, J. M., 81g:76007**

Cumberbatch, E. (*with* Norbury, J.) Capillary modification of the singularity at a free-streamline separation point. **81c:76007**

Fominyh, V. V. *See* **Sotina, N. B., 81h:76007**

Keller, Joseph B. *See* **Vanden-Broeck, Jean-Marc, 81k:76008**

Kinelovskiĭ, S. A. (*with* Trišin, Ju. A.) Symmetric collision of two-layer jets of an ideal incompressible fluid. (Russian) **81i:76007**

Logvinovič, G. L. (*with* Bulvol, V. M.) Hydrodynamics of cavitating flows with perturbations. **81c:76008**

Neppiras, E. A. Acoustic cavitation. **81j:76007**

Norbury, J. *See* **Cumberbatch, E., 81c:76007**

Nuttall, J. Sets of minimum capacity, Padé approximants and the bubble problem. (*See* **81f:00012)**

O'Carroll, M. J. A variational principle for ideal flow over a spillway. **81f:76007**

Petrila, Titus Mouvement général d'un profil dans un fluide idéal en présence d'une paroi perméable illimitée. Cadre variationnel et approximation par une méthode d'éléments finis. **81m:76004**

Potsch, K. Schwache Auftriebseffekte in laminaren, vertikalen, runden Freistrahlen. (English summary) **81e:76008**

Saĭkin, S. S. Transient cavitation flow around a contour in a canal. (Russian) **81h:76006**

Ščerbakov, E. A. Variational method in a problem of axially symmetric cavitational flow taking into account surface attraction. (Russian) **81j:76008**

Serebrjakov, V. V. *See* **Baĭarova, V. N., 81c:76006**

Servas, J. M. (*with* Chaissé, F.) Implosion, explosion, d'une cavité ellipsoïdale dans un fluide parfait incompressible occupant tout l'espace. (English summary) **81g:76007**

Ševčuk, Ju. P. Approximate analysis of cavities with allowance for surface tension and gravity. **81c:76009**

Sotina, N. B. (*with* Fominyh, V. V.) Symmetric cavity flow around a wedge in the presence of a source on the wedge or in the flow. (Russian) **81h:76007**

Trišin, Ju. A. *See* **Kinelovskiĭ, S. A., 81i:76007**

Vanden-Broeck, Jean-Marc (*with* Keller, Joseph B.) Bubble or drop distortion in a straining flow in two dimensions. **81k:76008**

secondary classifications:

Hanin, V. M. Jet flow around a smooth contour. (Russian) **(81f:76013)**

Kiselev, O. M. (*with* Rapoport, È. F.) Jet flow around an elastic shell with various methods for its fastening. (Russian) **(81g:73067)**

(*with* Rapoport, È. F.) Jet flow around an elastic shell of variable rigidity.

(Russian) (81g:73068)

Lin, T. H. An integral equation method for the numerical solution of a two-dimensional vertical jet under gravity. (81a:65127)

Mochimaru, Yoshihiro (*with* Tomita, Yukio) A numerical method for the solution of nonlinear equations with a number of variations. (81j:65118)

Nikulin, G. Z. (*with* Pirumov, U. G.; Pčelkina, L. V.; Rosljakov, G. S.) Three-dimensional flows of a gas in jets. (Russian) (81a:76032)

Pčelkina, L. V. *See* Nikulin, G. Z.; et al., (81a:76032)

Pirumov, U. G. *See* Nikulin, G. Z.; et al., (81a:76032)

Rapoport, È. F. *See* Kiselev, O. M., (81g:73067) *and* Kiselev, O. M., (81g:73068)

Rosljakov, G. S. *See* Nikulin, G. Z.; et al., (81a:76032)

Slezkiĭ, V. M. The behavior of the solutions of elliptic equations in unbounded capillary regions. (Russian) (81g:35032)

Tomita, Yukio *See* Mochimaru, Yoshihiro, (81j:65118)

76B15 Water waves, gravity waves; dispersion and diffraction, nonlinear interaction

Alavidze, Z. M. Propagation of waves caused by moving pressure when passing from one depth to another. (Russian) 81e:76009

Asghar, S. (*with* Rashid, M. A.) Diffraction of planetary waves by two parallel semi-infinite plates. 81a:76008

Bauer, H. F. Flüssigkeitsschwingungen mit freier Oberfläche in keilförmigen Behältern. (English summary) 81m:76005

Beale, J. Thomas Water waves generated by a pressure disturbance on a steady stream. 81g:76008

Beljaev, V. A. Interaction of surface gravitational waves with an arbitrarily arranged system of submerged discontinuities. (Russian) 81d:76011

Benjamin, T. Brooke (*with* Scott, John C.) Gravity-capillary waves with edge constraints. 81c:76010

Berkhoff, J. C. W. Diffraction of water waves. 81i:76008

Brown, Philip S., Jr. (*with* Pandolfo, Joseph P.) A gravity-wave problem with the upstream difference method. 81g:76009

Bryant, P. J. (*with* Laing, A. K.) Permanent wave structures and resonant triads in a layered fluid. 81c:76011

Bulgarelli, U. (*with* Rosati, M.) Numerical analysis of simulation models for shallow waters. (Italian. English summary) 81g:76010

Crapper, G. D. Energy and momentum integrals for progressive capillary-gravity waves. 81b:76008

Crawford, Donald R. (*with* Saffman, Philip G.; Yuen, Henry C.) Evolution of a random inhomogeneous field of nonlinear deep-water gravity waves. 81b:76009

Èdkin, V. S. *See* Voljak, K. I., 81f:76011

Fairweather, G. (*with* Navon, I. M.) A linear ADI method for the shallow-water equations. 81h:76008

Grimshaw, R. Mean flows induced by internal gravity wave packets propagating in a shear flow. 81b:76010

Hammack, Joseph L. (*with* Segur, Harvey) Modelling criteria for long water waves. 81c:76010

Harper, B. A. (*with* Sobey, R. J.; Stark, K. P.) Sensitivity analysis of a tropical cyclone surge model. (*See* 81a:76005)

Herterich, Klaus *See* Olbers, Dirk J., 81e:76012

Hidaka, Koji Poincaré waves and Kelvin waves in a rotating straight canal of parabolic section. 81g:76011

The oscillations of water in an annular basin of variable depth. 81j:76009

Hogan, S. J. Some effects of surface tension on steep water waves. II. 81e:76011

Hsu, J. R. C. (*with* Silvester, R.; Tsuchiya, Y.) Boundary-layer velocities and mass transport in short-crested waves. 81g:76012

Hui, W. H. Three-dimensional nonlinear evolution of water waves. 81j:76010

Janovskiĭ, V. V. *See* Moiseev, S. S.; et al., 81f:76010

Kawahara, Mutsuto On finite element methods in shallow water long wave flow analysis. 81j:76011

Ko, D. R. S. *See* Liu, A. K.; et al., 81d:76013

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Korpel, Adrianus Frequency approach to nonlinear dispersive waves. 81d:76012

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Laing, A. K. *See* Bryant, P. J., 81c:76011

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Limarčenko, O. S. Variational-method investigation of problems of nonlinear dynamics of a reservoir with a liquid. 81k:76009

Liu, A. K. (*with* Kubota, T.; Ko, D. R. S.) Resonant transfer of energy between nonlinear waves in neighboring pycnoclines. 81d:76013

Longuet-Higgins, M. S. Some new relations between Stokes's coefficients in the theory of gravity waves. 81g:76013

Spin and angular momentum in gravity waves. 81c:76012

A technique for time-dependent free-surface flows. 81g:76014

On the forming of sharp corners at a free surface. 81g:76015

Lucchi, Ciro W. Improvement of MacCormack's scheme for Burgers' equation using a finite element method. 81b:76011

Lukovskiĭ, I. O. (*with* Korneeva, A. S.) Nonlinear equations of motion of a fluid in a circular right cylinder and the determination of their coefficients by a variational method. (Russian) 81h:76009

Macpherson, Hugh The attenuation of water waves over a nonrigid bed. 81d:76014

Malik, S. K. (*with* Singh, Manohar) Nonlinear surface waves in self-gravitating fluids. 81h:76010

Marchi, Enrico The propagation of flood waves. (Italian. English summary) 81f:76008

Marshall, Guillermo (*with* Menendez, Angel) Numerical solution of a nonconservation form in shallow water theory. (*See* 81j:76001)

Masuda, Akira (*with* Kuo, Yi Yu; Mitsuyasu, Hisashi) On the dispersion relation of random gravity waves. I. Theoretical framework. 81f:76009a

(*with* Kuo, Yi Yu; Mitsuyasu, Hisashi) Corrigendum: "On the dispersion relation of random gravity waves. I. Theoretical framework". 81f:76009c

See also Mitsuyasu, Hisashi; et al., 81f:76009b

Mei, Chiang C. (*with* Tuck, E. O.) Forward scattering by long thin bodies. 81m:76006

See also Yue, Dick K. P., 81g:76019

Memos, C. D. Energy transmission by surface waves through an opening. 81g:76016

Menendez, Angel *See* Marshall, Guillermo, (*See* 81j:76001)

Meyer, Richard E. On the meaning of the Boussinesq and Korteweg-de Vries equations. 81g:76017

Mitsuyasu, Hisashi (*with* Kuo, Yi Yu; Masuda, Akira) On the dispersion relation of random gravity waves. II. An experiment. 81f:76009b

See also Masuda, Akira; et al., 81f:76009a *and* Masuda, Akira; et al., 81f:76009c

Moiseev, S. S. (*with* Tur, A. V.; Janovskiĭ, V. V.) Interaction of a packet with random noise in Burgers' equation. 81f:76010

Navon, I. M. *See* Fairweather, G., 81h:76008

Noye, B. J. (*with* Tronson, K. C. S.) Finite difference techniques applied to the simulation of tides and currents in gulfs. (*See* 81a:76005)

See also Webber, B.; et al., (*See* 81a:76005) *and* Teubner, M. D., (*See* 81a:76005)

Odulo, A. B. Long nonlinear waves in a rotating ocean of variable depth. (Russian) 81d:76015

Oğuztöreli, Mehmet Namık (*with* Şuhubi, E. S.; Leung, K. V.) Wave propagation in dissipative or dispersive nonlinear media: a numerical approach. 81j:76012

Olbers, Dirk J. (*with* Herterich, Klaus) The spectral energy transfer from surface waves to internal waves. 81e:76012

Pandolfo, Joseph P. *See* Brown, Philip S., Jr., 81g:76009

Peregrine, D. H. *See* Stiassnie, M., 81d:76016

Plotnikov, N. I. Existence of three-dimensional waves on the surface of an ideal fluid. (Russian. English summary) 81c:76013

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See also Ravindran, Renuka, 81h:76011

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Ravindran, Renuka (*with* Prasad, Phoolan) On signal propagation velocity and phase velocity. 81h:76011

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Rhodes-Robinson, P. F. On surface waves in the presence of immersed vertical boundaries. I. 81i:76009a

On surface waves in the presence of immersed vertical boundaries. II. 81i:76009b

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Rosati, M. *See* Bulgarelli, U., 81g:76010

Russell, David L. (*with* Reid, Russell M.) Water waves and problems of infinite time control. 81a:76009

Saffman, Philip G. (*with* Yuen, Henry C.) A note on numerical computations of large amplitude standing waves. 81a:76010

See also Crawford, Donald R.; et al., 81b:76009

Schwartz, Leonard W. (*with* Vanden-Broeck, Jean-Marc) Numerical solution of the exact equations for capillary-gravity waves. 81b:76012

Scott, John C. *See* Benjamin, T. Brooke, 81c:76010

Segur, Harvey Resonant interactions of surface and internal gravity waves. 81k:76010

See also Hammack, Joseph L., 81e:76010

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Singh, Manohar *See* Malik, S. K., 81h:76010

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Spiegel, E. A. Fluid dynamical form of the linear and nonlinear Schrödinger equations. 81k:76011

Srokosz, M. A. The submerged sphere as an absorber of wave power. 81a:76011

Stark, K. P. *See* Harper, B. A.; et al., (*See* 81a:76005)

Stiassnie, M. (*with* Peregrine, D. H.) Shoaling of finite-amplitude surface waves on water of slowly varying depth. 81d:76016

Şuhubi, E. S. *See* Oğuztöreli, Mehmet Namık; et al., 81j:76012

Teubner, M. D. (*with* Noye, B. J.) Tidal and thermal propagation in a tidal estuary. (*See* 81a:76005)

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Tkačenko, V. O. Study of irregular waves in a fluid layer by the method of numerical inversion of the integral Laplace transform. (Russian) 81e:76014

Toland, John F. On the existence of a wave of greatest height and Stokes's conjecture. 81d:76017

Tronson, K. C. S. *See* Noye, B. J., (*See* 81a:76005)

Tsuchiya, Y. *See* Hsu, J. R. C.; et al., 81g:76012

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Tur, A. V. *See* Moiseev, S. S.; et al., 81f:76010

Vanden-Broeck, Jean-Marc Advances in the numerical computation of capillary-gravity waves. 81g:76018

See also Schwartz, Leonard W., 81b:76012

Voljak, K. I. (*with* Èdkin, V. S.) Nonlinear interaction of weakly modulated surface and sound waves. 81f:76011

Webber, B. (*with* Rienecker, M. M.; Teubner, M. D.; Noye, B. J.) Comparison of some finite difference and analytical methods of solving tidal propagation equations. (*See* 81a:76005)

Whitham, G. B. ★Lectures on wave propagation. 81i:76010

Yue, Dick K. P. (*with* Mei, Chiang C.) Forward diffraction of Stokes waves by a thin wedge. 81g:76019

Yuen, Henry C. *See* Saffman, Philip G., 81a:76010 *and* Crawford, Donald R.; et al., 81b:76009

Zandbergen, P. J. On the intregral equation of lifting surface theory. (Dutch) (*See* 81c:65004)

secondary classifications:

Agumi, Rentaro Mixed problems for the linearized shallow water equations. **(81m:35120)**

Bagdoev, A. G. (*with* Oganjan, G. G.) Propagation of modulated nonlinear waves in a relaxing gas-liquid mixture. **(81i:76034)**

Belov, Ju. Ja. Theorems of unique solvability and approximation of certain boundary value problems for a system of equations describing an ocean current. (Russian) **(81i:35136)**

Boiti, M. (*with* Pempinelli, F.) Similarity solutions and Bäcklund transformations of the Boussinesq equation. (Italian summary) **(81i:35138)**

Bryant, P. J. (*with* Laing, A. K.) Permanent wave structures and resonant triads in a layered fluid. **(81c:76011)**

Bubnov, B. A. The Cauchy problem for the Korteweg-de Vries equation. (Russian) **(81g:35106)**

Easton, A. K. A tidal model of Corio Bay, Victoria. (*See* **81a:76005**)

Engelbrecht, J. *See* **Jeffrey, Alan, (81k:35146)**

Finn, John M. *See* **Wersinger, J.-M.; et al., (81d:76053)**

Flaschka, H. (*with* Forest, M. G.; McLaughlin, D. W.) Multiphase averaging and the inverse spectral solution of the Korteweg-de Vries equation. **(81k:35142)**

Fokas, A. S. A symmetry approach to exactly solvable evolution equations. **(81i:35144)**

Forest, M. G. *See* **Flaschka, H.; et al., (81k:35142)**

Goldstein, Jerome A. (*with* Wichnoski, Bruno J.) On the Benjamin-Bona-Mahony equation in higher dimensions. **(81i:35147)**

van Groesen, E. W. C. Unidirectional wave propagation in one-dimensional first-order Hamiltonian systems. **(81g:35074)**

Hutter, Kolumban Surface waves in a non-Newtonian incompressible liquid film. (German summary) **(81b:76003)**

Ichikawa, Yoshi H. *See* **Wadati, Miki; et al., (81g:35111)**

Jeffrey, Alan (*with* Engelbrecht, J.) A note on nonlinear dispersion relations. **(81k:35146)**

Kaup, David J. The inverse scattering solution for the full three-dimensional three-wave resonant interaction. **(81e:35114)**

Konno, Kimiaki *See* **Wadati, Miki; et al., (81g:35111)**

Laing, A. K. *See* **Bryant, P. J., (81c:76011)**

Lebedev, D. R. Benney's long waves equations: Hamiltonian formalism. **(81d:58034)**

(*with* Manin, Ju. I.) Benney's long wave equations. II. The Lax representation and conservation laws. (Russian) **(81m:58040)**

Longuet-Higgins, M. S. The trajectories of particles in steep, symmetric gravity waves. **(81g:86002)**

Lukomskiĭ, V. P. (*with* Mihaĭlova, I. G.) Complete integrability of physical systems described by a one-dimensional equation of Boussinesq type. (Russian) **(81f:35107)**

Manin, Ju. I. *See* **Lebedev, D. R., (81m:58040)**

McCarthy, Patrick J. Some linear Bäcklund transformations. **(81g:35109)**

McKean, H. P. Integrable systems and algebraic curves. **(81g:58017)**

McLaughlin, D. W. *See* **Flaschka, H.; et al., (81k:35142)**

Mihaĭlova, I. G. *See* **Lukomskiĭ, V. P., (81f:35107)**

Miliucci, Vincenzo More on gravity waves in MHD. (Italian. English summary) **(81j:76095)**

Mysak, Lawrence A. Topographically trapped waves. **(81e:86002)**

Netesova, T. M. Group classification and invariant solutions of the Korteweg-de Vries equation. (Russian) **(81f:35011)**

Oganjan, G. G. *See* **Bagdoev, A. G., (81i:76034)**

Oishi, Shin'ichi Relationship between Hirota's method and the inverse spectral method —the Korteweg-de Vries equation's case. **(81e:35011)**

Ott, Edward *See* **Wersinger, J.-M.; et al., (81d:76053)**

Ovsjannikov, L. V. Justification of the shallow water theory. (Russian) (*See* **80f:35002**)

Pempinelli, F. *See* **Boiti, M., (81i:35138)**

Petrov, V. V. Dynamics of nonlinear surface waves in a stratified ocean. **(81k:86004)**

Schulman, E. I. *See* **Zaharov, V. E., (81j:35077)**

Sharma, A. S. *See* **Shukla, P. K., (81k:76093)**

Shukla, P. K. (*with* Sharma, A. S.) Self-modulation of a wave-packet in a nonlinear dispersive medium. **(81k:76093)**

Wadati, Miki (*with* Konno, Kimiaki; Ichikawa, Yoshi H.) New integrable nonlinear evolution equations. **(81g:35111)**

Wersinger, J.-M. (*with* Finn, John M.; Ott, Edward) Bifurcation and "strange" behavior in instability saturation by nonlinear three-wave mode coupling. **(81d:76053)**

Wichnoski, Bruno J. *See* **Goldstein, Jerome A., (81i:35147)**

Zaharov, V. E. (*with* Schulman, E. I.) Degenerative dispersion laws, motion invariants and kinetic equations. **(81j:35077)**

76B20 Ship waves

Faltinsen, Odd M. (*with* Løken, Arne E.) Slow drift oscillations of a ship in irregular waves. **81j:76013**

Haussling, H. J. Two-dimensional linear and nonlinear stern waves. **81d:76018**

Løken, Arne E. *See* **Faltinsen, Odd M., 81j:76013**

Newman, J. N. The theory of ship motions. **81g:76020**

Ohring, Samuel (*with* Telste, John) The direct matrix imbedding technique for computing three-dimensional potential flow about arbitrarily shaped bodies. **81h:76013**

Srokosz, M. A. Some relations for bodies in a canal, with an application to wave-power absorption. **81g:76021**

Telste, John *See* **Ohring, Samuel, 81h:76013**

Vanden-Broeck, Jean-Marc Nonlinear gravity-capillary stern waves. **81m:76007**

secondary classifications:

Hui, W. H. Three-dimensional nonlinear evolution of water waves. **(81j:76010)**

76B25 Solitary and cnoidal waves

Brédimas, Antoine P. Totally singular solutions of a special class of linear or nonlinear partial differential operators: applications to some fluid mechanics equations. **81m:76008**

(Chen, Hsing Hen) *See* **Joseph, R. I., 81f:76012**

Fenton, J. D. A high-order cnoidal wave theory. **81a:76012**

Joseph, R. I. Comment on: "Internal-wave solitons of fluids with finite depth" [Phys. Rev. Lett. 43 (1979), no. 4, 264–266; MR 80c:76007] by H. H. Chen and Y. C. Lee. **81f:76012**

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(Lee, Y. C.) *See* **Joseph, R. I., 81f:76012**

Matsuno, Yoshimasa Solutions of the higher order Benjamin-Ono equation. **81g:76022**

Miles, John W. Guided solitary waves. **81d:76019**

Mirie, Rida M. *See* **Su, C. H., 81g:76023**

Placties, M. J. Diffraction d'une onde solitaire par une île circulaire. (English summary) **81d:76020**

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Alvarez-Estrada, R. F. Inverse scattering solution of nonlinear evolution equations in one space dimension: an introduction. **(81b:35085)**

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Bowtell, Graham (*with* Stuart, Allan E. G.) Particle motions and the dynamics of Korteweg-de Vries solitons. **(81k:35138)**

Christiansen, Peter L. On Bäcklund transformations and solutions to the 2+1 and 3+1 dimensional sine-Gordon equation. **(81k:35139)**

Corones, James Some heuristic comments on solitons, integrability conditions and Lie groups. **(81j:58065)**

Dasgupta, Brahmananda *See* **Gupta, M. R.; et al., (81j:76106)**

Engelbrecht, J. *See* **Jeffrey, Alan, (81m:73039)**

Gajewski, Herbert (*with* Zacharias, Klaus) Über Näherungsverfahren zur Lösung der nichtlinearen Schrödinger-Gleichung mit selbstkonsistentem Potential. **(81a:35089)**

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Hantadze, A. G. *See* **Kobaladze, Z. L.; et al., (81m:86005)**

Hirota, Ryogo (*with* Ramani, Alfred) The Miura transformations of Kaup's equation and of Mikhailov's equation. **(81k:35144)**

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Leibbrandt, George (*with* Morf, Rudolf; Wang, Shein Shion) Solutions of the sine-Gordon equation in higher dimensions. **(81f:35106)**

Lerche, I. (*with* Wiita, P. J.) Soliton solutions and their stability for the flow of relativistic fluids through channels. **(81b:76077)**

Lions, Pierre-Louis *See* **Berestycki, Henri, (81i:35137)**

Matsuno, Yoshimasa Interaction of the Benjamin-Ono solitons. **(81d:35072)**

Matveev, V. B. (*with* Yavor, M. I.) Solutions presque périodiques et à N-solitons de l'équation hydrodynamique non linéaire de Kaup. (English summary) **(81b:35087)**

Morf, Rudolf *See* **Leibbrandt, George; et al., (81f:35106)**

Nakamura, Akira A direct method of calculating periodic wave solutions to nonlinear evolution equations. I. Exact two-periodic wave solution. **(81m:35023a)**

A direct method of calculating periodic wave solutions to nonlinear evolution equations. II. Exact one- and two-periodic wave solution of the coupled bilinear equations. **(81m:35023b)**

Noguchi, Akira *See* **Sakai, Kiyoshi, (81m:35131)**

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Pataraja, A. D. *See* **Kobaladze, Z. L.; et al., (81m:86005)**

Petrov, V. V. Dynamics of nonlinear surface waves in a stratified ocean. **(81k:86004)**

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Sakai, Kiyoshi (*with* Noguchi, Akira) Dark soliton in long and short wave resonant interaction. **(81m:35131)**

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Sternberg, Shlomo *See* **Iacob, Andrei, (81h:58035)**

Stuart, Allan E. G. *See* **Bowtell, Graham, (81k:35138)**

Šulman, I. G. *See* **Poljačenko, V. L., (81a:85003)**
Turchetti, Giorgio Padé approximants and soliton solutions of the KdV equation. **(81k:35153)**
Vakulenko, S. A. The effect of perturbation on solutions of some nonlinear equations. (Russian. English summary) **(81b:35088)**
Wang, Shein Shion *See* **Lelbbrandt, George; et al., (81f:35106)**
Wilts, P. J. *See* **Lerche, I., (81b:76077)**
Yamagata, Hideo On Bäcklund transformation associated with the sine-Gordon equation in 3+1 dimensions. **(81k:35154)**
Yavor, M. I. *See* **Matveev, V. B., (81b:35087)**
Zacharias, Klaus *See* **Gajewski, Herbert, (81a:35089)**

76B35 Random waves

76B40 Added mass computations

76B99 None of the above, but in this section

Alelikov, Ju. Z. Hydrodynamic action on a thin body during its non-steady-state longitudinal motion in a fluid of finite depth. (Russian) **81c:76014**
Amenzade, R. Ju. Oscillation of fluid in a viscoelastic tube of variable circular cross section. (Russian) **81a:76013**
Arminjon, Paul (*with* Beauchamp, Claude) Continuous and discontinuous finite element methods for Burgers' equation. **81k:76012**
Badrukhin, Ju. I. (*with* Kuznecov, V. V.) A certain form of equations of hydrodynamics of an ideal incompressible fluid and a variational principle for steady-state flow with a free surface. (Russian) **81e:76015**
Barnard, B. W. Some effects of the line dynamics on an hydraulic system. (*See* **81a:76005**)
Batchelor, G. K. Mass transfer from a particle suspended in fluid with a steady linear ambient velocity distribution. **81m:76010**
Beauchamp, Claude *See* **Arminjon, Paul, 81k:76012**
Boucher, E. A. Capillary phenomena: properties of systems with fluid/fluid interfaces. **81j:76014**
Brosa, U. (*with* Krappe, H. J.) On the dynamics of colliding droplets. **81h:76012**
Casling, E. M. A theoretical investigation of an asymmetric planing hull at infinite Froude number. **81j:76015**
Cooke, Charlie H. Improvement in the slotted wall boundary condition by numerical methods. **81j:76016**
Cosnet, J. Décomposition des champs de vecteurs, application à la mécanique des fluides de la méthode des éléments finis. **81e:76016**
Dilmurodov, N. (*with* Muhammadiev, K.) Asymptotic behavior of the boundary between a gas and a liquid in motion of a pressure jump along the surface of a film of liquid. (Russian) **81m:76011**
Greenberg, James Spiral waves for λ-ω systems. **81m:76012**
Gurevič, I. L. Outflow of a capillary fluid from a vessel. (Russian) **81i:76011**
Flow around a flexible shell fastened to a curvilinear wall. (Russian) **81j:76017**
Plane flow of a fluid in a channel with elastic walls. (Russian) **81m:76013**
Jakimov, Ju. L. *See* **Vil'hovčenko, S. D., 81i:76013**
Kawarada, Hideo Numerical solution of free boundary problem for ideal fluid. **81k:76013**
Krappe, H. J. *See* **Brosa, U., 81h:76012**
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Muhammadiev, K. *See* **Dilmurodov, N., 81m:76011**
Nakayama, Tsukasa (*with* Washizu, Kyuichiro) Nonlinear analysis of liquid motion in a container subjected to forced pitching oscillation. **81e:76017**
Nusayr, Abdul-Majid Propagation of waves in rectangular ducts with sinusoidal undulations. **81m:76014**
Petrila, Titus Une nouvelle méthode pour l'étude de l'écoulement produit par le déplacement d'un système de n profils mobiles dans un fluide idéal. **81g:76024**
Pristaro, Agostino Geometrodynamics of some nonrelativistic incompressible fluids. **81b:76014**
Rhodes-Robinson, P. F. On waves at an interface between two liquids. **81g:76025**
Sachdev, P. L. Exact, self-similar, time-dependent free surface flows under gravity. **81a:76014**
Sayer, P. The long-wave behaviour of the virtual mass in water of finite depth. **81g:76026**
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Vil'hovčenko, S. D. (*with* Jakimov, Ju. L.) Hydrodynamic reactions on a small body with surface undergoing deformation in an ideal incompressible fluid when the flow is three-dimensional and irrotational or two-dimensional with uniform vorticity. **81i:76013**
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Chudnovsky, Gregory V. *See* **Chudnovsky, David V., (81j:58048)**
Davis, A. M. J. The torque on a rotating body in a liquid with a surfactant layer and its relation to the virtual mass of a heaving body. **(81k:76022)**
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Manakov, S. V. *See* **Zaharov, V. E.; et al., (81g:35112)**
Nalimov, V. I. (*with* Plotnikov, P. I.) Boundary value problems for the dynamics of an ideal fluid with free boundaries. (Russian) (*See* **80f:35002**)
Novikov, S. P. *See* **Zaharov, V. E.; et al., (81g:35112)**
Pitaevskiĭ, L. P. *See* **Zaharov, V. E.; et al., (81g:35112)**
Plotnikov, P. I. *See* **Nalimov, V. I., (*See* 80f:35002)**
Zaharov, V. E. (*with* Manakov, S. V.; Novikov, S. P.; Pitaevskiĭ, L. P.) ★Теория солитонов. (Russian) [Theory of solitons] **(81g:35112)**

76Cxx Incompressible inviscid fluids, vorticity flows

76C05 Vorticity flows

Baker, Gregory R. The "cloud in cell" technique applied to the roll up of vortex sheets. **81g:76028**
Boldrighini, Carlo (*with* Frigio, Sandro) Equilibrium states for a plane incompressible perfect fluid. **81h:76014a**
(*with* Frigio, Sandro) Erratum: "Equilibrium states for a plane incompressible perfect fluid". **81h:76014b**
Burbea, Jacob Vortex motions and conformal mappings. **81i:76014**
Eršin, Š. A. (*with* Kaltaev, A.) Self-similar development of a ring vortex in a viscous fluid. (Russian) **81i:76015**
Frigio, Sandro *See* **Boldrighini, Carlo, 81h:76014a** *and* **Boldrighini, Carlo, 81h:76014b**
Ghosh, N. L. (*with* Masanta, M. L.) On the behaviour of vortices in the flow past a cylinder. Series A (perfect fluids). I. Case of a single vortex. **81a:76015a**
(*with* Masanta, M. L.) On the behaviour of vortices in the flow past a cylinder. Series A (perfect fluids). III. Case of any number of arbitrary vortices. **81a:76015c**
(*with* Masanta, M. L.) On the behaviour of vortices in the flow past a cylinder. Series A (perfect fluids). II. Case of two vortices. **81a:76015b**
Haid, Ole H. (*with* Mauceri Del Prete, Vincenza) Convergence of vortex methods for Euler's equations. **81b:76015a**
Convergence of vortex methods for Euler's equations. II. **81b:76015b**
Hanin, V. M. Jet flow around a smooth contour. (Russian) **81f:76013**
Kalinuškin, M. E. *See* **Kostjunin, B. N.; et al., 81a:76016**
Kaltaev, A. *See* **Eršin, Š. A., 81i:76015**
Kokorev, L. S. *See* **Kostjunin, B. N.; et al., 81a:76016**
Kostjunin, B. N. (*with* Kokorev, L. S.; Kalinuškin, M. E.) The relationship between scale characteristics of inhomogeneous turbulent flows and the vortex structure. **81a:76016**
Leonard, A. Vortex methods for flow simulation. **81i:76016**
Lindgren, E. Rune Vorticity and rotation. **81e:76019**
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Masanta, M. L. *See* **Ghosh, N. L., 81a:76015a**; **Ghosh, N. L., 81a:76015b** *and* **Ghosh, N. L., 81a:76015c**
Mauceri Del Prete, Vincenza *See* **Haid, Ole H., 81b:76015a**
Moore, D. W. The velocity of a vortex ring with a thin core of elliptical cross section. **81b:76016**
Ni, Wei Ming On the existence of global vortex rings. **81i:76017**
(Nikolaevskiĭ, V. N.) *See* **Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices, 81e:76018**
Podio-Guidugli, P. *See* **Martins, L. C., 81d:76021**
Reddy, J. N. (*with* Warburton, J. D.) A comparative study of numerical schemes for the solution of two-dimensional advection flows. **81m:76015**
Rotunno, Richard Vorticity dynamics of a convective swirling boundary layer. **81e:76020**
Shankar, P. N. (*with* Sinha, U. N.) Weakly sheared, two-dimensional inviscid flows past bodies. (French summary) **81g:76029**
Sinha, U. N. *See* **Shankar, P. N., 81g:76029**
(Stepanov, G. Ju.) *See* **Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices, 81e:76018**
Šulev, K. Z. Condition for the external hydrodynamic effect for a rotating body of revolution partially submersed in a fluid. (Bulgarian. Russian and English summaries) **81f:76014**
Tarasenko, L. N. Numerical solution of the problem of toroidal axially symmetric flows with a free boundary. (Russian) **81d:76022**
Tarasov, V. F. *See* **Vladimirov, V. A., 81g:76031**
Tsai, Chon Yin (*with* Widnall, Sheila E.) Examination of group-velocity criterion for breakdown of vortex flow in a divergent duct. **81g:76030**
Vladimirov, V. A. (*with* Tarasov, V. F.) Formation of vortex rings. (Russian) **81g:76031**
Warburton, J. D. *See* **Reddy, J. N., 81m:76015**
Widnall, Sheila E. *See* **Tsai, Chon Yin, 81g:76030**
Ziglin, S. L. Nonintegrability of the problem of the motion of four point vortices. (Russian) **81e:76021**
Free vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **81e:76018**
Quantum vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **81e:76018**
Stability and separation of a boundary layer ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **81e:76018**
Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **81e:76018**

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Boldrighini, Carlo (*with* Frigio, Sandro) Equilibrium states for the two-dimensional incompressible Euler fluid. **(81k:82024a)**
(*with* Frigio, Sandro) Errata: "Equilibrium states for the two-dimensional incompressible Euler fluid". **(81k:82024b)**
Chirila-Socolescu, Rodica On the existence of classical solutions of exterior semilinear elliptic boundary value problems with application to plane fluid flows. **(81k:35051)**
Fabrikant, A. L. *See* **Golemitok, G. M., (81i:76029)**
Frigio, Sandro *See* **Boldrighini, Carlo, (81k:82024a)** *and* **Boldrighini, Carlo, (81k:82024b)**
Golemitok, G. M. (*with* Fabrikant, A. L.) Scattering and amplification of sound waves by a cylindrical vortex. **(81i:76029)**
Jakimov, Ju. L. *See* **Vil'hovčenko, S. D., (81i:76013)**
Kažihov, A. V. (*with* Ragulin, V. V.) Nonstationary problems of the flow of an ideal fluid through a bounded region. (Russian) **(81j:76029)**
Lavrent'eva, O. M. An example of steady-state motion of a finite fluid mass. (Russian) **(81j:76019)**
Prasad, S. N. (*with* Thakur, P. J.) Two-dimensional universal motions of Navier-Stokes fluids. **(81j:76025)**
Ragulin, V. V. *See* **Kažihov, A. V., (81j:76029)**
Ribaut, M. A kinematical study of Kirchhoff-Rayleigh flow. (French summary) **(81h:76017)**
Thakur, P. J. *See* **Prasad, S. N., (81j:76025)**
Valli, Alberto *See* **Beirão da Veiga, Hugo, (81e:35109)**
Vil'hovčenko, S. D. (*with* Jakimov, Ju. L.) Hydrodynamic reactions on a small body with surface undergoing deformation in an ideal incompressible fluid when the flow is three-dimensional and irrotational or two-dimensional with uniform vorticity. **(81i:76013)**

76C10 Internal waves

Basovič, A. Ja. Transformation of the surface wave spectrum due to the action of an internal wave. **81g:76032**

secondary classifications:

Matsuno, Yoshimasa Solutions of the higher order Benjamin-Ono equation. **(81g:76022)**

76C15 Atmospheric waves

Frederiksen, J. S. (*with* Sawford, B. L.) Statistical dynamics of two-dimensional inviscid flow on a sphere. **81d:76023**
Noye, B. J. Finite difference schemes for the solution of linearised wind effect equations. (*See* **81a:76005**)
Reddy, J. N. *See* **Sasaki, Y. K., 81m:76016**
Sasaki, Y. K. (*with* Reddy, J. N.) A comparison of stability and accuracy of some numerical models of two-dimensional circulation. **81m:76016**
Sawford, B. L. *See* **Frederiksen, J. S., 81d:76023**

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Holton, J. R. Wave propagation and transport in the middle atmosphere. **(81b:86001)**
Kasahara, Akira Effect of zonal flows on the free oscillations of a barotropic atmosphere. **(81d:76051)**
Matsuno, Yoshimasa Interaction of the Benjamin-Ono solitons. **(81d:35072)**
Zeytounian, Radyadour Kh. Models for Lee waves in a baroclinic compressible troposphere. **(81e:86019)**

76C20 Rossby waves

secondary classifications:

Ahmed, B. M. (*with* Eltayeb, I. A.) On the propagation, reflexion, transmission and stability of atmospheric Rossby-gravity waves on a beta-plane in the presence of latitudinally sheared zonal flows. **(81m:86004)**
Berestov, A. L. Solitary Rossby waves. **(81i:86001)**
Černous'ko, Ju. L. *See* **Dolžanskiĭ, F. V.; et al., (81f:76022)**
Dolžanskiĭ, F. V. (*with* Kurganskiĭ, M. V.; Černous'ko, Ju. L.) Laboratory and theoretical study of barotropic Rossby waves in a rotating annular channel. **(81f:76022)**
Eltayeb, I. A. *See* **Ahmed, B. M., (81m:86004)**
Kurganskiĭ, M. V. *See* **Dolžanskiĭ, F. V.; et al., (81f:76022)**
Mesinger, F. Dependence of vorticity analogue and the Rossby wave phase speed on the choice of horizontal grid. **(81m:86006)**
Odulo, A. B. Long nonlinear waves in a rotating ocean of variable depth. (Russian) **(81d:76015)**

76C99 None of the above, but in this section

Aref, Hassan (*with* Pomphrey, Neil) Integrable and chaotic motions of four vortices. **81k:76014**
Davies, Huw C. A pseudo-upstream differencing scheme for advection. **81j:76018**
Fletcher, C. A. J. On the application of a least squares residual-fitting finite element formulation to fluid flow problems. **81k:76015**
Gray, William G. *See* **Lynch, Daniel R., 81e:76022**
Landweber, L. *See* **Miloh, T., 81k:76016**
Lavrent'eva, O. M. An example of steady-state motion of a finite fluid mass. (Russian) **81j:76019**
Lynch, Daniel R. (*with* Gray, William G.) Finite element simulation of flow in deforming regions. **81e:76022**
Magazenkov, L. N. Schemes for integration with respect to time of the equations of motion of a fluid, with effective suppression of high-frequency components. (Russian) **81g:76033**
Mareş, C. (*with* Mareş, Ileana) The integration of the hydrodynamic primitive equations by the spectral method. (*See* **81j:93006a**)
Mareş, Ileana *See* **Mareş, C., (*See* 81j:93006a)**
Miloh, T. (*with* Landweber, L.) Generalization of the Kelvin-Kirchhoff equations for the motion of a body through a fluid. **81k:76016**
Pomphrey, Neil *See* **Aref, Hassan, 81k:76014**

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Berestycki, Henri On some free boundary problems arising in plasma physics and vortex rings theory. **(81c:82017)**
Brandt, Achi (*with* Dendy, J. E., Jr.; Ruppel, Hans) The multigrid method for semi-implicit hydrodynamics codes. **(81g:76079)**
Cooley, C. R. *See* **Thorndike, A. S.; et al., (81m:58022)**
Dendy, J. E., Jr. *See* **Brandt, Achi; et al., (81g:76079)**
Kažihov, A. V. (*with* Ragulin, V. V.) Nonstationary problems of the flow of an ideal fluid through a bounded region. (Russian) **(81j:76029)**
Kupershmidt, Boris (*with* Manin, Ju. I.) Long wave equations with a free surface. I. Conservation laws and solutions. (Russian) **(81a:58027)**
(*with* Manin, Ju. I.) Long wave equations with a free surface. II. The Hamiltonian structure and the higher equations. (Russian) **(81a:58028)**
Manin, Ju. I. *See* **Kupershmidt, Boris, (81a:58027)** *and* **Kupershmidt, Boris, (81a:58028)**
Nye, J. F. *See* **Thorndike, A. S.; et al., (81m:58022)**
Ragulin, V. V. *See* **Kažihov, A. V., (81j:76029)**
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Thorndike, A. S. (*with* Cooley, C. R.; Nye, J. F.) The structure and evolution of flow fields and other vector fields. **(81m:58022)**
Ye, Du Zheng *See* **Zeng, Qing Cun, (81h:86008)**
Zeng, Qing Cun (*with* Ye, Du Zheng) The adaptation processes of motion in rotating atmosphere. (Chinese. English summary) **(81h:86008)**

76Dxx Incompressible viscous fluids

76D05 Navier-Stokes equations [See also 35Q10.]

Acrivos, Andreas *See* **Hinch, E. J., 81d:76030**
Amick, Charles J. Steady solutions of the Navier-Stokes equations representing plane flow in channels of various types. **81m:76017**
Anderson, O. L. Calculation of internal viscous flows in axisymmetric ducts at moderate to high Reynolds numbers. **81g:76034**
Babenko, K. I. (*with* Orlova, M. G.; Stebunov, V. A.) Periodic flows, close to the Poiseuille flow in a flat channel. (Russian. English summary) **81j:76020**
On properties of steady viscous incompressible fluid flows. **81e:76023**
Barclay, W. H. (*with* Ridha, A. H.) Flow in streamwise corners of arbitrary angle. **81j:76021**
Barrett, K. E. (*with* Demunshi, G.; Shields, D. N.) A minimax principle for the Navier-Stokes equations. **81d:76024**
Basdevant, C. Parameterization of subgrid-scale motion in numerical simulation of 2-dimensional Navier-Stokes equation at high Reynolds number. **81m:76018**
Bontoux, Patrick *See* **Roux, Bernard; et al., 81e:76028**
Bruns, F. W. Numerical calculation on creeping flow in a closed cylindrical cavity. **81b:76017**
Buning, P. G. *See* **Shang, J. S.; et al., 81g:76037**
Comini, G. (*with* Del Giudice, S.; Strada, M.) Finite element analysis of laminar flow in the entrance region of ducts. **81b:76018**
Cooper, R. E. *See* **Pepper, D. W., 81d:76034**
Crane, C. M. *See* **Richards, C. W., 81d:76035**
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Williams, James C., III (*with* Rhyne, T. B.) Boundary layer development on a wedge impulsively set into motion. **81b:76025**
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Cnik, A. D. D. Nonlinear evolution and breakdown in unstable boundary layers. **(81g:76058)**
Hsu, J. R. C. (*with* Silvester, R.; Tsuchiya, Y.) Boundary-layer velocities and mass transport in short-crested waves. **(81g:76012)**
Meecham, W. C. (*with* Tavis, M. T.) Theoretical pressure correlation functions in turbulent boundary layers. **(81d:76059)**
Nachman, Arje (*with* Callegari, A.) A nonlinear singular boundary value problem in the theory of pseudoplastic fluids. **(81e:76003)**
Paris, R. B. On the asymptotic expansions of solutions of an *n*th order linear differential equation. **(81d:34044)**
Rotunno, Richard Vorticity dynamics of a convective swirling boundary layer. **(81e:76020)**
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Tsuchiya, Y. *See* **Hsu, J. R. C.; et al., (81g:76012)**
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Merkin, J. H. Mixed convection boundary layer flow on a vertical surface in a saturated porous medium. **(81j:76081)**
Stepanov, G. Ju. The basic models of mechanics of liquids and gases in the theory of the wing. **(81m:76003)**

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76D30 Singular perturbation problems

Nir, Avinoam On the slow viscous rolling of a sphere in contact with a permeable surface. **81h:76019**
Slavčev, Slavčo G. Transient motion of a sphere from a state of rest in a viscous incompressible fluid. (Russian. English summary) **81b:76030**

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Hsiao, George C. (*with* Weinacht, Richard J.) Singular perturbations for a weakly nonlinear hyperbolic equation. **(81j:35076)**
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76D99 None of the above, but in this section

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Bykov, V. M. Stokes flows in a sphere. (Russian) **81g:76044**
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Davis, R. T. (*with* Rubin, S. G.) Non-Navier-Stokes viscous flow computations. **81d:76043**
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Entov, V. M. (*with* Kestenboim, H. S.; Rožkov, A. N.; Šarčevič, L. I.) Dynamic equilibrium shape of a film of viscous or viscoelastic liquid. **81j:76031**
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Zel'dina, E. A. Calculation of unsteady viscous liquid flow in complex piping systems. **81h:76024**
Zwick, Walter The relaxation method for solving balance equations. (Russian) (*See* **81j:65013**)

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Arminjon, Paul (*with* Beauchamp, Claude) Continuous and discontinuous finite element methods for Burgers' equation. **(81k:76012)**
Babenko, K. I. Stationary solutions of the problem of the flow of a viscous

incompressible fluid around a body. (Russian) (*See* **80f:35002**)

Barthès-Biesel, D. Motion of a spherical microcapsule freely suspended in a linear shear flow. (**81k:76096**)

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Brooks, A. *See* **Hughes, Thomas J. R., (81f:76040)**

Fletcher, C. A. J. On the application of a least squares residual-fitting finite element formulation to fluid flow problems. (**81k:76015**)

Gresho, Philip M. (*with* Lee, Robert L.) Don't suppress the wiggles—they're telling you something! (**81f:76037**)

Griffiths, D. F. (*with* Mitchell, Andrew Ronald) On generating upwind finite element methods. (**81f:76038**)

Heinrich, J. C. (*with* Zienkiewicz, O. C.) The finite element method and "upwinding" techniques in the numerical solution of convection dominated flow problems. (**81f:76039**)

Hughes, Thomas J. R. (*with* Brooks, A.) A multidimensional upwind scheme with no crosswind diffusion. (**81f:76040**)

Inoue, Atsushi (*with* Miyakawa, Tetsuro) On the existence of solutions for linearized Euler's equation. (**81e:35104**)

Kaneda, Yukio Brownian motion of an almost spherical drop of viscous fluid and fluctuating hydrodynamics. (**81d:82048**)

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Leonard, B. P. A survey of finite differences of opinion on numerical muddling of the incomprehensible defective confusion equation. (**81f:76041**)

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Tkačenko, V. O. Study of irregular waves in a fluid layer by the method of numerical inversion of the integral Laplace transform. (Russian) (**81e:76014**)

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76Exx Hydrodynamic stability

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Hennenberg, Marcel (*with* Bisch, P. M.; Vignes-Adler, M.; Sanfeld, A.) Interfacial instability and longitudinal waves in liquid-liquid systems. (*See* **81j:76045**)

Herron, Isom H. A completeness observation on the stability equations for stratified viscous shear flows. **81b:76031**

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Miles, John W. On Kelvin-Helmholtz instability. **81g:76048**

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Smith, F. T. (*with* Bodonyi, R. J.) On the stability of the developing flow in a channel or circular pipe. **81k:76023**

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Solopenko, V. M. Asymptotic representation of solutions of the Orr-Sommerfeld equation. (Russian) **81c:76021**

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Akbay, U. Über den Einfluß der veränderlichen Viskosität auf die Stabilität der ebenen Kanalströmung. (English summary) **(81d:76007)**

Tam, Christopher K. W. Excitation of instability waves in a two-dimensional shear layer by sound. **(81e:76064)**

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Book, David L. Convective instability of self-similar spherical expansion into a vacuum. **81c:76022**

Cross, M. C. Derivation of the amplitude equation at the Rayleigh-Bénard instability. **81j:76033**

Daniels, P. G. The effect of centrifugal acceleration on axisymmetric convection in a shallow rotating cylinder or annulus. **81h:76026**

Eagles, P. M. A Bénard convection problem with a perturbed lower wall. **81e:76038**

Gerjuoi, G. Z. (*with* Ljubimov, D. V.; Žuhovickiĭ, E. M.) Stability of stationary convective flow of a mixture in a vertical porous layer. **81f:76020**

Giaretta, D. L. On absolute and convective instabilities. **81g:76051**

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Sharma, R. C. Thermal instability through porous medium of compressible fluids. **81f:76021**

Straus, Joe M. *See* **Zebib, Abdelfattah; et al., 81d:76050**

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Walton, I. C. The stability of free convection in a horizontal cylindrical annulus. **81j:76034**

Yanase, Shinichiro The instability of natural convection in a fluid layer between coaxial cylinders. **81d:76049**

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Zebib, Abdelfattah (*with* Schubert, Gerald; Straus, Joe M.) Infinite Prandtl number thermal convection in a spherical shell. **81d:76050**

Žuhovickiĭ, E. M. *See* **Gerjuoi, G. Z.; et al., 81f:76020**

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Sanuki, H. *See* **Welland, J., (81j:76112)**

Tokuyama, Michio On the theory of fluctuations around nonequilibrium steady states. A generalized time-convolutionless projector formalism. **(81i:82029)**

Welland, J. (*with* Sanuki, H.) Formation of convective cells by modulational instability of drift Alfvén waves. **(81j:76112)**

76E20 Instability of geophysical and astrophysical flows

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Hameury, J. M. (*with* Bonazzola, S.; Heyvaerts, Jean) Stability of accretion column flows. **81k:76024**

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Malik, S. K. (*with* Singh, Manohar) Modulational instability in a self-gravitating fluid column. **81d:76052**

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Baptista, J. P. (*with* Gerbal, D.) The Jeans's instability in an expanding medium. **(81k:85008)**

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Gibbon, J. D. (*with* McGuinness, Mark J.) A derivation of the Lorenz equations for some unstable dispersive physical systems. **(81m:35124)**

Kahn, F. D. Turbulent mixing of stellar winds and interstellar gas. **(81b:85002)**

Källén, E. (*with* Wiin-Nielsen, A. C.) Nonlinear, low order interactions. (Russian summary) **(81k:86006)**

Lau, Y. Y. (*with* Lin, C. C.) Density-wave theory of spiral structure of galaxies. **(81m:85002)**

Lin, C. C. *See* **Lau, Y. Y., (81m:85002)**

Malik, S. K. (*with* Singh, Manohar) Nonlinear surface waves in self-gravitating fluids. **(81h:76010)**

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Shimizu, T. (*with* Morioka, N.) Chaos and limit cycles in the Lorenz model. **(81k:58048)**

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Zahn, Jean-Paul Stellar convection theory. (*See* **81j:85001**)

76E25 Magnetohydrodynamic and electrohydrodynamic instabilities

Chakraborty, B. B. Rayleigh-Taylor instability in the presence of an oscillating magnetic field permeating both heavier and lighter fluids. **81b:76032**

Ene, Horia I. (*with* Ungureanu-David, Elena) On certain problems of electroconvection in porous media. (Romanian. English summary) **81g:76053**

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Garabedian, P. R. Magnetic flux surfaces in a stellarator field. **81j:76035**
Gasilov, V. A. (*with* Goloviznin, V. M.; Taran, M. D.; Tilkin, V. F.; Favorskiĭ, A. P.; Šaškov, M. Ju.) Numerical simulations of the Rayleigh-Taylor instability in an incompressible fluid. (Russian. English summary) **81b:76033**
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Gupta, J. R. On the stability of generalized hydromagnetic convection. (Turkish summary) **81j:76036**
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Killeen, J. (*with* Schnack, D. D.; Shestakov, A. I.) Linear and nonlinear calculation of resistive magnetohydrodynamic instabilities. **81k:76026**
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Maiellaro, Michele (*with* Palese, Lidia) On the steady MHD flows of a binary mixture into a porous slant layer in the presence of the Hall effect and on their stability. (Italian. English summary) **81j:76037**
(*with* Redaelli, Aldo) On steady magnetohydrodynamic motions between coaxial cylinders in the presence of anisotropic currents and on their stability. (Italian. English summary) **81j:76038**
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Palese, Lidia *See* **Maiellaro, Michele, 81j:76037**
Prudnikov, V. V. Instability of a layer of a conducting viscous fluid surrounding a solid rod. **81g:76054**
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Hydromagnetic capillary instability of a liquid jet with an axial flow. **81b:76034**
Soward, A. M. Finite-amplitude thermal convection and geostrophic flow in a rotating magnetic system. **81g:76055**
Takashima, M. Electrohydrodynamic instability in a dielectric fluid between two coaxial cylinders. **81g:76056**
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Teichmann, Jiri Stochastic stability of MHD equilibria. **81j:76039**
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Ungureanu-David, Elena *See* **Ene, Horia I., 81g:76053**

secondary classifications:

Chao, Y. A. (*with* Frantz, E. R.; Yang, T. F.) The effective mode approximation for analyzing position instability of a tokamak plasma. **(81j:76101)**
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Jardin, S. C. *See* **de Lucia, J.; et al., (81g:76113)**
de Lucia, J. (*with* Jardin, S. C.; Todd, A. M. M.) An iterative metric method for solving the inverse tokamak equilibrium problem. **(81g:76113)**
Reiman, Allan Decay of a lower-hybrid wave to two lower-hybrid waves. **(81d:76123)**
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76E30 Nonlinear effects

Amaranath, T. Taylor instability of superposed fluids for wave numbers near linear cutoff wave number. (German summary) **81g:76057**
Bajaj, A. K. (*with* Sethna, P. R.; Lundgren, T. S.) Hopf bifurcation phenomena in tubes carrying a fluid. **81j:76040**
Craik, A. D. D. Nonlinear evolution and breakdown in unstable boundary layers. **81g:76058**
Davis, Stephen H. (*with* Homsy, George M.) Energy stability theory for free-surface problems: buoyancy-thermocapillary layers. **81g:76059**
Dokučaev, L. V. (*with* Šetuhin, V. L.) Stability of large oscillations of a fluid in a vessel performing angular motions. (Russian) **81i:76022**
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Joseph, Daniel D. Direct and repeated bifurcation into turbulence. **81e:76042**
Lundgren, T. S. *See* **Bajaj, A. K.; et al., 81j:76040**
Ott, Edward *See* **Wersinger, J.-M.; et al., 81d:76053**
Plotnikov, P. I. Ill-posedness of the nonlinear problem of the development of Taylor instability. (Russian) **81j:76041**
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Wersinger, J.-M. (*with* Finn, John M.; Ott, Edward) Bifurcation and "strange" behavior in instability saturation by nonlinear three-wave mode coupling. **81d:76053**

secondary classifications:

Franceschini, Valter A Feigenbaum sequence of bifurcations in the Lorenz model. **(81g:58023)**

Rionero, Salvatore On the use of weighted norms in stability questions on exterior domains. **(81d:73050)**

76E99 None of the above, but in this section

Al-Rawi, A. *See* **Poore, A. B., 81a:76027**
Aryšev, Ju. A. (*with* Golovin, V. A.; Eršin, Š. A.) Qualitative analysis of hydrodynamic stability of flow in a zone of mixture of equal counterflows. (Russian) **81m:76023**
Bartels, Fritz *See* **Krause, Egon, 81c:76026**
Bisch, P. M. *See* **Sanfeld, A.; et al., (*See* 81j:76045)**
Čečko, G. A. *See* **Gerih, V. V., 81m:76024**
Chorin, Alexandre Joel Vortex models and boundary layer instability. **81e:76043**
Cline, Michael C. Stability aspects of diverging subsonic flow. **81a:76026**
Dalle-Vedove, W. *See* **Sanfeld, A.; et al., (*See* 81j:76045)**
Davis, Stephen H. Moving contact lines and rivulet instabilities. I. The static rivulet. **81d:76054**
Dervieux, A. (*with* Thomasset, F.) A finite element method for the simulation of a Rayleigh-Taylor instability. **81c:76024**
Dixit, V. V. (*with* Sarath, B.; Sobouti, Y.) Two basis sets for the g- and p-modes of self-gravitating fluids. **81h:76028**
Drew, Donald A. Stability of a Stokes layer of a dusty gas. **81k:76029**
Duck, P. W. Linear centrifugal instability of a thick Stokes' layer. **81j:76042**
Dupeyrat, M. Experimental study of the mechanism of a new hydrodynamical instability observed at some interfaces between immiscible liquids. (*See* **81c:35001**)
Eagles, P. M. (*with* Smith, F. T.) The influence of nonparallelism in channel flow stability. **81g:76060**
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Finson, Michael L. *See* **Legner, Hartmut H., 81j:76044**
Gerih, V. V. (*with* Čečko, G. A.) Stability of the boundary layer in longitudinal flow around a thin circular cylinder. (Russian. English summary) **81m:76024**
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Grabowski, Walter J. Nonparallel stability analysis of axisymmetric stagnation-point flow. **81j:76043**
Hasegawa, Eiji (*with* Taniyama, Nobuyuki) Effect of the wind fluctuation on the stability of a liquid layer flowing down an inclined plane. **81d:76056**
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Jarin, A. L. Stability of a jet of viscoelastic liquid in the presence of a mass flux at its surface. **81d:76055**
Kolesov, V. V. Stability of nonisothermal Couette flow. **81f:76024**
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Krause, Egon (*with* Bartels, Fritz) Finite-difference solutions of the Navier-Stokes equations for axially symmetric flows in spherical gaps. **81c:76026**
van Lamsweerde-Gallez, D. *See* **Sanfeld, A.; et al., (*See* 81j:76045)**
Legner, Hartmut H. (*with* Finson, Michael L.) On the stability of fine-scaled turbulent free shear flows. **81j:76044**
Lifšic, A. M. Stability of the asymptotic boundary layer with suction against finite-amplitude perturbations. **81k:76031**
Maiellaro, Michele *See* **Rionero, Salvatore, 81c:76027**
Ovčinnikov, V. A. (*with* Pavlov, V. G.) Hydrodynamic stability of incompressible boundary layers with variable viscosity. **81g:76062**
Pavlov, V. G. *See* **Ovčinnikov, V. A., 81g:76062**
Poore, A. B. (*with* Al-Rawi, A.) Some applicable Hopf bifurcation formulas and an application in wind engineering. **81a:76027**
Rao, S. K. Lakshmana Cosserat fluid motions. **81g:76061**
Rionero, Salvatore (*with* Maiellaro, Michele) Uniqueness and universal stability in media in fluid dynamics. (Italian. English summary) **81c:76027**
Sanfeld, A. (*with* Steinchen, A.; Hennenberg, Marcel; Bisch, P. M.; van Lamsweerde-Gallez, D.; Dalle-Vedove, W.) Mechanical, chemical, and electrical constraints and hydrodynamic interfacial instability. (*See* **81j:76045**)
Sarath, B. *See* **Dixit, V. V.; et al., 81h:76028**
Slemrod, M. Unstable viscoelastic fluid flows. **81f:76025**
Stability of steady shearing flows subject to large shearing perturbations in a nonlinear viscoelastic fluid. **81f:76026**
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Sorensen, Torben Smith (*with* Hennenberg, Marcel) Instability of a spherical drop with surface chemical reactions and transfer of surfactants. (*See* **81j:76045**)
See also **Dynamics and instability of fluid interfaces, 81j:76045**
Steinchen, A. *See* **Sanfeld, A.; et al., (*See* 81j:76045)**
Taniyama, Nobuyuki *See* **Hasegawa, Eiji, 81d:76056**
Thomasset, F. *See* **Dervieux, A., 81c:76024**
Tougou, Hirohumi Stability of turbulent roll-waves in an inclined open channel. **81b:76035**
Warren, F. W. Restrictions upon instabilities of plane and helical gas flows. **81k:76032**
Zollars, Richard L. (*with* Krantz, William B.) Nonparallel flow effects on the stability of film flow down a right circular cone. **81a:76028**
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Fluid interfaces ★Dynamics and instability of fluid interfaces. **81j:76045**
Lyngby ★Dynamics and instability of fluid interfaces. **81j:76045**
Meeting:
Dynamics and Instability of Fluid Interfaces ★Dynamics and instability of fluid interfaces. **81j:76045**

secondary classifications:

Akbay, U. (*with* Becker, Ernst; Krozer, S.; Sponagel, S.) Instability of slow viscometric flow. **(81d:76009)**
Becker, Ernst *See* **Akbay, U.; et al., (81d:76009)**
Boucher, E. A. Capillary phenomena: properties of systems with fluid/fluid interfaces. **(81j:76014)**
Catton, I. *See* **Yao, L. S.; et al., (81g:76095)**
Drury, L. O'C. Numerical solution of Orr-Sommerfeld-type equations. **(81h:65082)**
Husnutdinova, N. V. Asymptotic properties of solutions of an equation of one-dimensional non-steady-state filtration of a two-phase fluid. (Russian) **(81b:76061)**
Krozer, S. *See* **Akbay, U.; et al., (81d:76009)**
Malfliet, W. P. M. A systematic method for the solution of some nonlinear evolution equations. I. The Burgers equations. **(81j:35099)**
McDonough, J. M. *See* **Yao, L. S.; et al., (81g:76095)**
Prosperetti, Andrea Normal-mode analysis for the oscillations of a viscous liquid drop in an immiscible liquid. (French summary) **(81g:76047)**
Rusanov, V. V. (*with* Šarakšane, A. A.) On the nonuniqueness of the solution of the problem on steady flow about the plane wedge and circular cone. **(81d:76070)**
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Spanos, T. J. T. A stability analysis of immiscible viscous displacement in a homogeneous porous medium. (French summary) **(81h:76054)**
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Xu, Shuo Chang Variational principle for stability of spinning solid bodies with liquid-filled cavities and its applications. **(81e:49038)**
Yao, L. S. (*with* Catton, I.; McDonough, J. M.) Asymmetric boundary layer on a nonisothermally heated cone. **(81g:76095)**

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secondary classifications:

Tougou, Hirobumi Stability of turbulent roll-waves in an inclined open channel. **(81b:76035)**
All-Union Seminar:
Turbulent Flows ★Third All-Union Seminar on Turbulent Flows. Part I. **(81d:76004)**
★Third All-Union Seminar on Turbulent Flows. Part II. **(81d:76005)**
Turbulent flows ★Third All-Union Seminar on Turbulent Flows. Part I. **(81d:76004)**
★Third All-Union Seminar on Turbulent Flows. Part II. **(81d:76005)**
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★Third All-Union Seminar on Turbulent Flows. Part II. **(81d:76005)**

76F05 Homogeneous isotropic turbulence

Bertoglio, Jean-Pierre (*with* Charnay, Georges; Gence, Jean-Noël; Mathieu, Jean) Effet d'une rotation en bloc sur les spectres des corrélations doubles d'une turbulence homogène soumise à des gradients de vitesse. (English summary) **81e:76045**
Charnay, Georges *See* **Bertoglio, Jean-Pierre; et al., 81e:76045**
Frisch, U. (*with* Lesieur, M.; Schertzer, D.) Comments on the quasinormal Markovian approximation for fully-developed turbulence. **81c:76028**
Gence, Jean-Noël *See* **Bertoglio, Jean-Pierre; et al., 81e:76045**
Gosman, A. D. (*with* Rapley, C. W.) Fully-developed flow in passages of arbitrary cross-section. (*See* **81j:76002**)
Herring, Jackson R. Statistical theory of quasigeostrophic turbulence. **81d:76057**
Kuznecov, V. R. Statistical properties of turbulence in the inertial subrange of the spectrum. **81j:76046**
Lesieur, M. *See* **Frisch, U.; et al., 81c:76028**
Levich, E. The large-momentum, high-frequency spectrum of a randomly stirred fluid. **81h:76029**
Mascheck, Hans-Joachim Stochastic models of turbulence. (*See* **81j:65013**)
Mathieu, Jean *See* **Bertoglio, Jean-Pierre; et al., 81e:76045**
Phythian, R. On Lücke's theory of turbulence. **81g:76063**
Plobotnikov, K. È. A model of turbulence that is isotropic and homogeneous with respect to the impulse moment of a quasipair. (Russian. English summary) **81h:76030**
Rapley, C. W. *See* **Gosman, A. D., (*See* 81j:76002)**
Schertzer, D. *See* **Frisch, U.; et al., 81c:76028**
Sosinovič, V. A. Closed equation for the probability distribution of velocity and temperature differences between two points in an isotropically turbulent stream of an incompressible fluid. **81e:76046**

secondary classifications:

Basdevant, C. Parameterization of subgrid-scale motion in numerical simulation of 2-dimensional Navier-Stokes equation at high Reynolds number. **(81m:76018)**
Manneville, Paul (*with* Pomeau, Yves) Different ways to turbulence in dissipative dynamical systems. **(81h:58041)**
Pomeau, Yves *See* **Manneville, Paul, (81h:58041)**

76F10 Shear flows

Alber, Irwin E. Turbulent wake of a thin, flat plate. **81g:76064**
Barndorff-Nielsen, O. Models for non-Gaussian variation, with applications to turbulence. **81b:76036**
Beljakov, Ju. M. (*with* Semičev, A. Ja.; Fafurin, A. V.) Laminar boundary layer development in nozzles with turbulent outer flow. **81j:76047**
Bradshaw, Peter *See* **Cebeci, Tuncer; et al., 81d:76058**
Cebeci, Tuncer (*with* Chang, Kuo Cheng; Bradshaw, Peter) Solution of a hyperbolic system of turbulence-model equations by the "box" scheme. **81d:76058**
Chang, Kuo Cheng *See* **Cebeci, Tuncer; et al., 81d:76058**
Cousteix, Jean (*with* Le Balleur, Jean-Claude; Houdeville, Robert) Calcul des couches limites turbulentes instationnaires en mode direct ou inverse, écoulements de retour inclus. Analyse des singularités. (English summary) **81f:76027**
Fafurin, A. V. *See* **Beljakov, Ju. M.; et al., 81j:76047**
Gemidžiev, Georgi Poiseuille-Couette turbulent flow. (Bulgarian. Russian and English summaries) **81m:76025**
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Hughes, T. G. *See* **Taylor, C.; et al., 81e:76047**
Le Balleur, Jean-Claude *See* **Cousteix, Jean; et al., 81f:76027**
Meecham, W. C. (*with* Tavis, M. T.) Theoretical pressure correlation functions in turbulent boundary layers. **81d:76059**
Morgan, K. *See* **Taylor, C.; et al., 81e:76047**
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Tavis, M. T. *See* **Meecham, W. C., 81d:76059**
Taylor, C. (*with* Morgan, K.; Hughes, T. G.) Analysis of turbulent free shear flow and heat transfer using the mixing length hypothesis. **81e:76047**
Yoshizawa, Akira A statistical investigation upon the eddy viscosity in incompressible turbulence. **81d:76060**

secondary classifications:

Finson, Michael L. *See* **Legner, Hartmut H., (81j:76044)**
Legendre, Robert Bruits émis par des tubes de tourbillons au cours de leur évolution. (English summary) **(81j:76074)**
Legner, Hartmut H. (*with* Finson, Michael L.) On the stability of fine-scaled turbulent free shear flows. **(81j:76044)**

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Adachi, Yukio *See* **Kita, Yoshinori; et al., 81d:76063**
Balerlein, Ralph Small-scale magnetic fields in turbulence: Saffman's approximation revisited. **81j:76048**
Batchelor, G. K. Mass transfer from small particles suspended in turbulent fluid. **81g:76065**
Benzi, Roberto (*with* Vitaletti, Marcello; Vulpiani, Angelo) Energy dissipation and Kolmogorov law in turbulent flows. **81h:76031**
Bradshaw, Peter (*with* Woods, J. D.) Geophysical turbulence and buoyant flows. (*See* **80d:76044**)
Introduction. (*See* **80d:76044**)
Čalikov, D. V. ★Математическое моделирование ветрового волнения. (Russian) [Mathematical modeling of wind turbulence] **81m:76026**
Cheung, Augustine A numerical model for the study of turbulent lubrication theory. (*See* **81i:90005**)
Cheung, F. B. Heat source-driven thermal convection at arbitrary Prandtl number. **81f:76028**
Chorin, Alexandre Joel Flame advection and propagation algorithms. **81d:76061**
Debnath, Lokenath ★Oceanic turbulence. **81g:76066**
Fernholz, H.-H. External flows. (*See* **80d:76044**)
Gitterman, M. (*with* Steinberg, V.) Memory effects in the motion of a suspended particle in a turbulent fluid. **81j:76049**
Gledzer, E. B. Reduction of the Navier-Stokes equations to nonlinear chains of cascade type. **81f:76029**
(Harris, C. J.) *See* **Mathematical modelling of turbulent diffusion in the environment, 81j:76051**
Helland, K. N. (*with* Lii, K. S.; Rosenblatt, Murray) Bispectra and energy transfer in grid-generated turbulence. **81b:76037**
Hirose, Kōji *See* **Kita, Yoshinori; et al., 81d:76063**
Jagodkin, V. I. *See* **Tret'jakov, V. V., 81d:76065**
Johnston, J. P. Internal flows. (*See* **80d:76044**)
Kako, Fujio (*with* Kono, Mitsuo) Successive bifurcations to chaotic state in the nonlinear evolution of collisional drift wave. **81d:76062**
Kaplan, James L. (*with* Yorke, James A.) The onset of chaos in a fluid flow model of Lorenz. **81a:76029**
Kita, Yoshinori (*with* Adachi, Yukio; Hirose, Kōji) Periodically oscillating turbulent flow in a pipe. **81d:76063**
Klawick, A. (*with* Stross, N.) Unsteady, turbulent flow in pipes. (German summary) **81e:76048**
Knobloch, Edgar On the relationship between Eulerian and Lagrangian turbulent diffusivities. **81j:76050**
Knorr, Georg (*with* Mond, Michael) Iterative approach to strong turbulence theory. **81d:76064**
Kono, Mitsuo *See* **Kako, Fujio, 81d:76062**
Lii, K. S. *See* **Helland, K. N.; et al., 81b:76037**
Lumley, John L. Computational modeling of turbulent flows. **81g:76067**
Ly, Uy Loi Calculation of response correlation matrices for aircraft subject to three-dimensional turbulence. (*See* **81j:93004**)
Marinescu, Paul V. A method for determining the velocity and temperature distribution in incompressible jet flow. (Romanian. English summary) **81m:76027**
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Mouin, A. S. On the nature of turbulence. **81b:76038**
Plohotnikov, K. È. On the question of modeling turbulent motion. (Russian. English summary) **81a:76030**
Pravdina, M. H. On the determination of the mixing length for turbulent channel flow. **81a:76031**
Prilmak, V. G. (*with* Roždestvenskiĭ, B. L.; Simakin, I. N.) Numerical modeling of one-dimensional turbulence. (Russian. English summary) **81k:76033**
Reeks, M. W. Eulerian direct interaction applied to the statistical motion of particles in a turbulent fluid. **81g:76068**
Rosenblatt, Murray *See* **Helland, K. N.; et al., 81b:76037**

Roĭdestvenskiĭ, B. L. *See* **Prīlmak, V. G.; et al., 81k:76033**
Simakin, I. N. *See* **Prīlmak, V. G.; et al., 81k:76033**
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Stern, Melvin E. A variational principle for turbulent flow. **81k:76034**
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Traving, G. Mesoturbulence. (*See* **81j:85001**)
Tret'jakov, V. V. (*with* Jagodkin, V. I.) Mathematical analysis of whirled turbulent flow through a pipe. **81d:76065**
Vitaletti, Marcello *See* **Benzi, Roberto; et al., 81h:76031**
Vulpiani, Angelo *See* **Benzi, Roberto; et al., 81h:76031**
Woods, J. D. *See* **Bradshaw, Peter, (*See* 80d:76044)**
Yorke, James A. *See* **Kaplan, James L., 81a:76029**
Conference:
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Liverpool ★Mathematical modelling of turbulent diffusion in the environment. **81j:76051**
Mathematical modelling of turbulent diffusion in the environment ★Mathematical modelling of turbulent diffusion in the environment. **81j:76051**
Modeling ★Mathematical modelling of turbulent diffusion in the environment. **81j:76051**

secondary classifications:

Arnéodo, A. *See* **Tresser, C.; et al., (81j:58058b)**
Blohin, A. M. (*with* Romenskiĭ, E. I.) The effect of properties of a limit stationary solution on its proof. (Russian) **(81j:76060)**
(Černyh, K. F.) *See* **Studies in elasticity and plasticity, (81k:73002)**
Chatwin, P. C. (*with* Sullivan, Paul J.) Some turbulent diffusion invariants. **(81a:76041)**
Coullet, P. *See* **Tresser, C.; et al., (81j:58058b)**
Curev, A. The hydromechanical theory of continuous mixing in baffled agitated vessels with curved-blade turbine impellers. **(81b:76028)**
Derrida, B. (*with* Pomeau, Yves) Feigenbaum's ratios of two-dimensional area preserving maps. **(81m:58051)**
Dobrowolny, M. (*with* Mangeney, A.; Veltri, P.) Fully developed anisotropic hydromagnetic turbulence in interplanetary space. **(81d:76103)**
Franceschini, Valter A Feigenbaum sequence of bifurcations in the Lorenz model. **(81g:58023)**
Fujisaka, Hirokazu *See* **Mori, Hazime, (81k:58047)**
(Gray, D. F.) *See* **Stellar turbulence, (81j:85001)**
Huberman, B. A. (*with* Rudnick, Joseph) Scaling behavior of chaotic flows. **(81e:82007)**
Janovskiĭ, V. V. *See* **Moiseev, S. S.; et al., (81f:76010)**
Joseph, Daniel D. Direct and repeated bifurcation into turbulence. **(81e:76042)**
Kahn, F. D. Turbulent mixing of stellar winds and interstellar gas. **(81b:85002)**
Kalinuškin, M. E. *See* **Kostjunin, B. N.; et al., (81a:76016)**
Kokorev, L. S. *See* **Kostjunin, B. N.; et al., (81a:76016)**
Kostjunin, B. N. (*with* Kokorev, L. S.; Kalinuškin, M. E.) The relationship between scale characteristics of inhomogeneous turbulent flows and the vortex structure. **(81a:76016)**
Krīl', S. I. The energy balance for a suspension-bearing flow and its consequences. **(81b:76066)**
Concerning the gravitational theory of transport of suspended solids by turbulent liquid flows. **(81b:76067)**
Lasota, Andrzej Invariant measures and a linear model of turbulence. **(81d:54032)**
(Linsky, J. L.) *See* **Stellar turbulence, (81j:85001)**
Mandelbrot, Benoit B. Discussion paper: fractals, attractors, and the fractal dimension. **(81f:00010)**
Mangeney, A. *See* **Dobrowolny, M.; et al., (81d:76103)**
Moiseev, S. S. (*with* Tur, A. V.; Janovskiĭ, V. V.) Interaction of a packet with random noise in Burgers' equation. **(81f:76010)**
Mori, Hazime (*with* Fujisaka, Hirokazu) Statistical dynamics of chaotic flows. **(81k:58047)**
(Moroz0v, N. F.) *See* **Studies in elasticity and plasticity, (81k:73002)**
Pomeau, Yves *See* **Derrida, B., (81m:58051)**
Romenskiĭ, E. I. *See* **Blohin, A. M., (81j:76060)**
Rössler, Otto E. Chaos. **(81g:58025)**
Roĭdestvenskiĭ, B. L. Ideal problems of hydrodynamics spectral properties of flows of a viscous fluid and their connection with turbulence. (Russian) (*See* **80f:35002**)
Rudnick, Joseph *See* **Huberman, B. A., (81e:82007)**
Sattinger, David H. Bifurcation and symmetry breaking in applied mathematics. **(81i:58020)**
Sazontov, A. G. The similarity relation and turbulence spectra in a stratified medium. **(81k:76082)**
Shimizu, T. A periodic solution of the Lorenz equation in the high Rayleigh number limit. **(81m:58054)**
Simó, Carlos On the Hénon-Pomeau attractor. **(81j:58058a)**
Sullivan, Paul J. *See* **Chatwin, P. C., (81a:76041)**
Tresser, C. (*with* Coullet, P.; Arnéodo, A.) Topological horseshoe and numerically observed chaotic behaviour in the Hénon mapping. **(81j:58058b)**
Tur, A. V. *See* **Moiseev, S. S.; et al., (81f:76010)**
Veltri, P. *See* **Dobrowolny, M.; et al., (81d:76103)**
Colloquium:
International Astronomical Union ★Stellar turbulence. **(81j:85001)**
Continuum mechanics ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **(81k:73002)**
Elasticity ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **(81k:73002)**
London, Ont. ★Stellar turbulence. **(81j:85001)**
Plasticity ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **(81k:73002)**
Stellar turbulence ★Stellar turbulence. **(81j:85001)**
Studies in elasticity and plasticity ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **(81k:73002)**

76Gxx General aerodynamics and subsonic flows

76G05 Hodograph methods

76G10 Kármán-Tsien approximation

secondary classifications:

Ruggeri, Tommaso On the integration of a quasilinear hyperbolic system of two equations with two independent completely exceptional variables. (Italian. English summary) **(81j:35074)**

76G15 Iterative methods

76G20 Free-streamline theory

76G99 None of the above, but in this section

Chi, M. R. Lifting and nonlifting kernel functions for cascade and isolated airfoils. **81h:76032**
Fromme, Joseph A. (*with* Golberg, Michael A.) Reformulation of Possio's kernel with application to unsteady wind tunnel interference. **81j:76052**
Golberg, Michael A. *See* **Fromme, Joseph A., 81j:76052**
Kraus, Werner Panel methods in aerodynamics. (*See* **80e:76002**)
Ručinskiĭ, V. S. Solution of a problem of aerodynamics. (Russian) **81c:76029**
Verdon, J. M. *See* **Werle, M. J., (*See* 81j:76001)**
Werle, M. J. (*with* Verdon, J. M.) Solutions for laminar subsonic trailing edge flows at asymptotically large Reynolds numbers. (*See* **81j:76001**)

secondary classifications:

Belocerkovskiĭ, O. M. (*with* Erofeev, A. I.; Janickiĭ, V. E.) A nonstationary method for direct statistical simulation of rarefied gas flows. (Russian) **(81k:76052)**
Block, Patricia J. W. *See* **Tam, Christopher K. W., (81e:76065)**
Deconinck, Herman (*with* Hirsch, Charles) Subsonic and transonic computation of cascade flows. **(81j:76054)**
Dutoya, Denis (*with* Michard, Pierre-Jacques) Une méthode de volumes finis de type implicite pour le calcul des écoulements elliptiques. (English summary) **(81b:65101)**
Erofeev, A. I. *See* **Belocerkovskiĭ, O. M.; et al., (81k:76052)**
Friedrich, N. Zur Faktorisierung einiger Kerne, die bei Ausstrahlungsproblemen der Elektrodynamik und Aeroelastizität auftreten. **(81j:33009)**
Hanin, V. M. Jet flow around a smooth contour. (Russian) **(81f:76013)**
Hirsch, Charles *See* **Deconinck, Herman, (81j:76054)**
Janickiĭ, V. E. *See* **Belocerkovskiĭ, O. M.; et al., (81k:76052)**
Le Balleur, Jean-Claude (*with* Peyret, R.; Viviand, Henri) Numerical studies in high Reynolds number aerodynamics. **(81d:76074)**
Lipscombe, J. M. Aerospace systems. (*See* **81m:93005**)
Messick, Roger E. *See* **Napolitano, Michele, (81d:76038)**
Michard, Pierre-Jacques *See* **Dutoya, Denis, (81b:65101)**
Napolitano, Michele (*with* Messick, Roger E.) On strong slot injection into a subsonic laminar boundary layer. **(81d:76038)**
Peyret, R. *See* **Le Balleur, Jean-Claude; et al., (81d:76074)**
Tam, Christopher K. W. (*with* Block, Patricia J. W.) On the tones and pressure oscillations induced by flow over rectangular cavities. **(81e:76065)**
Viviand, Henri *See* **Le Balleur, Jean-Claude; et al., (81d:76074)**
Zandbergen, P. J. On the intregral equation of lifting surface theory. (Dutch) (*See* **81c:65004**)

76H05 Transonic flows, limit lines

Adachi, Takeshi *See* **Ukeguchi, Nobuhiro; et al., 81d:76066**
Ballhaus, William F. Some recent progress in transonic flow computations. (*See* **80e:76002**)
Chakrabartty, S. K. (*with* Subramanian, N. R.) Low-frequency and small perturbation equation for transonic flow past wings. **81j:76053**
Cheng, H. K. (*with* Meng, S. Y.) The oblique wing as a lifting-line problem in transonic flow. **81c:76030**
Cramer, M. S. Lifting three-dimensional wings in transonic flow. **81e:76049**
Deconinck, Herman (*with* Hirsch, Charles) Subsonic and transonic computation of cascade flows. **81j:76054**
Eastep, Franklin E. *See* **Marsh, James E., 81m:76028**
Fonarev, A. S. Induction of walls of transonic wind tunnels and ways of reducing it. (Russian) **81j:76055**
Garabedian, P. R. Shockless airfoils for wings, compressors, and turbines. **81j:76056**
Glowinski, Roland (*with* Mantel, B.; Periaux, J.; Pironneau, Olivier; Poirier, G.) An efficient preconditioned conjugate gradient method applied to nonlinear problems in fluid dynamics via least square formulations. **81k:76035**
Hafez, M. M. *See* **Wellford, L. Carter, Jr., 81d:76067**
Harris, Wesley L. *See* **Sivaneri, Nithiam T., 81j:76058**
Hirsch, Charles *See* **Deconinck, Herman, 81j:76054**
Jameson, Antony Transonic flow calculations. (*See* **80e:76002**)
Mantel, B. *See* **Glowinski, Roland; et al., 81k:76035**
Marsh, James E. (*with* Eastep, Franklin E.) Analysis of a symmetric transonic aerofoil with the finite element method: a new upwinding technique. **81m:76028**
Meng, S. Y. *See* **Cheng, H. K., 81c:76030**

Nixon, David Observations on the strained coordinate method for transonic flows. **81b:76039**
Osher, Stanley One-sided difference schemes and transonic flow. **81j:76057**
Periaux, J. *See* **Glowinski, Roland; et al., 81k:76035**
Prouncan, Olivier *See* **Glowinski, Roland; et al., 81k:76035**
Poirier, G. *See* **Glowinski, Roland; et al., 81k:76035**
Sakata, Hiroshi *See* **Ukeguchi, Nobuhiro; et al., 81d:76066**
Schmidt, Wolfgang Progress in transonic flow computations: analysis and design methods for three-dimensional flows. (*See* **80e:76002**)
Sichel, Martin Unsteady transonic nozzle flow with heat addition. **81m:76029**
Sivaneri, Nithiam T. (*with* Harris, Wesley L.) Numerical solutions of transonic flows by parametric differentiation and integral equation techniques. **81j:76058**
Strehmel, Karl Näherungsmethoden für ebene transsonische Profilströmungen mit der Hodographenmethode. **81j:76059**
Subramanian, N. R. *See* **Chakrabartty, S. K., 81j:76053**
Ukeguchi, Nobuhiro (*with* Sakata, Hiroshi; Adachi, Takeshi) On the numerical analysis of compressible flow problems by the "modified FLIC method". **81d:76066**
Wellford, L. Carter, Jr. (*with* Hafez, M. M.) A finite element first-order equation formulation for the small-disturbance transonic flow problem. **81d:76067**
Williams, M. H. Unsteady thin airfoil theory for transonic flows with embedded shocks. **81g:76069**

secondary classifications:

Arieli, Rimon (*with* Murphy, John D.) Pseudodirect solution to the boundary-layer equations for separated flow. **(81d:76040)**
Chang, Ch'iu Chin (*with* Lin, Yü Pin) On uniqueness of mixed type systems. **(81k:35109)**
Engquist, Björn (*with* Osher, Stanley) Stable and entropy satisfying approximations for transonic flow calculations. **(81b:65082)**
Kovačev, D. V. The Frankl' problem in an unbounded domain. (Bulgarian. Russian and English summaries) **(81f:35085)**
Lin, Yü Pin *See* **Chang, Ch'iu Chin, (81k:35109)**
Morice, Philippe (*with* Viviand, Henri) Équations de conservation et condition d'irréversibilité pour les écoulements transsoniques potentiels. (English summary) **(81k:35104)**
Murphy, John D. *See* **Arieli, Rimon, (81d:76040)**
Osher, Stanley *See* **Engquist, Björn, (81b:65082)**
Ribaut, M. (*with* Scheld, R.) A hybrid method for calculating vector fields subject to inhomogeneous boundary conditions. (French summary) **(81c:76020)**
Scheld, R. *See* **Ribaut, M., (81c:76020)**
Viviand, Henri *See* **Morice, Philippe, (81k:35104)**

76Jxx Supersonic flows

76J05 Hodograph methods

secondary classifications:

Cazacu, Mircea On the stability of numerical solutions of the liquid viscous flows with heat transfer and cavities. **(81a:76036)**
Ly, Uy Loi Calculation of response correlation matrices for aircraft subject to three-dimensional turbulence. (*See* **81j:93004**)

76J10 Method of characteristics

76J99 None of the above, but in this section

Blohin, A. M. (*with* Romenskiĭ, E. I.) The effect of properties of a limit stationary solution on its proof. (Russian) **81j:76060**
Bulah, B. M. Motion of a wedge with variable supersonic velocity in a gas at rest. **81k:76036**
Fletcher, C. A. J. Application of an improved method of integral relations to the supersonic boundary layer flow about cones at large angles of attack. (*See* **81a:76005**)
Fung, K. Y. (*with* Sobieczky, H.; Seebass, R.) Shock-free wing design. **81h:76033**
Jagudin, S. V. Reduction of time and increase of accuracy of the determination of the momentum factor of supersonic jets in calculations by numerical methods. (Russian) **81f:76030**
Kireev, V. I. (*with* Pirumov, U. G.) The calculation of steady-state supersonic flows with nonequilibrium chemical reactions. (Russian) **81b:76040**
Li, C. P. A computational procedure for supersonic flows governed by the parabolic Navier-Stokes equations. **81g:76070**
Nikulin, G. Z. (*with* Pirumov, U. G.; Pčelkina, L. V.; Rosljakov, G. S.) Three-dimensional flows of a gas in jets. (Russian) **81a:76032**
Pčelkina, L. V. *See* **Nikulin, G. Z.; et al., 81a:76032**
Pirumov, U. G. *See* **Nikulin, G. Z.; et al., 81a:76032** *and* **Kireev, V. I., 81b:76040**
Romenskiĭ, E. I. *See* **Blohin, A. M., 81j:76060**
Rosljakov, G. S. *See* **Nikulin, G. Z.; et al., 81a:76032**
Ryžov, O. S. (*with* Žuk, V. I.) Internal waves in the boundary layer with self-induced pressure. (French summary) **81j:76061**
Schiff, Lewis B. (*with* Steger, Joseph L.) Numerical simulation of steady supersonic viscous flow. **81j:76062**
Seebass, R. *See* **Fung, K. Y.; et al., 81h:76033**
Sobieczky, H. *See* **Fung, K. Y.; et al., 81h:76033**
Staicu, Ştefan Mouvement supersonique autour de l'aile delta en rotation, avec séparation du courant aux bords. (Romanian summary) **81g:76071**
Steger, Joseph L. *See* **Schiff, Lewis B., 81j:76062**
Wellmann, J. Eine verallgemeinerte Achsenausstrahlungslösung der Wellengleichung und die daraus resultierenden Überschallfelder. (English and Russian summaries) **81h:76034**
Žuk, V. I. *See* **Ryžov, O. S., 81j:76061**

secondary classifications:

Averenkova, G. I. (*with* Egorova, N. I.; Pirumov, U. G.) Motion of a polydisperse mixture of a gas and particles in a supersonic jet. (Russian) **(81k:76056)**
Blagosklonov, V. I. (*with* Stasenko, A. L.) Two-dimensional nozzle and jet flows of a multiphase mixture. **(81b:76064)**
Blohin, A. M. Well-posedness of a mixed problem for a nonstationary system of differential equations used in the numerical calculation of supersonic steady-state conical gas flows. (Russian) **(81b:76042)**
Danilov, Ju. M. (*with* Kondrat'ev, V. V.) Calculation of mixed subsonic and supersonic gas flow in channels of complex form with partially permeable wall. **(81i:76025)**
Egorova, N. I. *See* **Averenkova, G. I.; et al., (81k:76056)**
Ishii, R. (*with* Kawasaki, K.) Limiting particle streamline of gas particle mixtures in axially symmetric nozzles. **(81k:76079)**
Kawasaki, K. *See* **Ishii, R., (81k:76079)**
Kiselev, O. M. (*with* Rapoport, È. F.) An elastic plate in a supersonic gas flow. (Russian) **(81m:73045)**
Kondrat'ev, V. V. *See* **Danilov, Ju. M., (81i:76025)**
Pirumov, U. G. *See* **Averenkova, G. I.; et al., (81k:76056)**
Rapoport, È. F. *See* **Kiselev, O. M., (81m:73045)**
Stasenko, A. L. *See* **Blagosklonov, V. I., (81b:76064)**

76K05 Hypersonic flows

Bhutani, O. P. (*with* Sharma, N. I.) Self-similar solutions of irrotational axially symmetric hypersonic flow equation. **81i:76023**
Dudin, G. N. (*with* Neĭland, V. Ja.) Heat transfer in the neighborhood of a point of inflection in the leading edge of a plate in hypersonic flight. **81k:76037**
Jain, S. C. *See* **Tawakley, V. B., 81k:76038**
Neĭland, V. Ja. *See* **Dudin, G. N., 81k:76037**
Ovsjannikov, M. P. On calculation of viscous interaction in terms of the pressure on conical bodies. **81g:76072**
Sharma, N. I. *See* **Bhutani, O. P., 81i:76023**
Tawakley, V. B. (*with* Jain, S. C.) Minimum ballistic factor problem of slender axial symmetric missiles. **81k:76038**

secondary classifications:

Barancev, R. G. (*with* Èngel'gart, V. N.) Asymptotic solution near the shock-layer separation point in hypersonic flow around blunted bodies. (Russian. English summary) **(81b:76041)**
Berdičevskiĭ, V. L. Variational-asymptotic method of constructing the nonlinear shell theory. **(81k:73034)**
Èngel'gart, V. N. *See* **Barancev, R. G., (81b:76041)**
Gao, Zhi *See* **Wang, Ru Quan; et al., (81i:35135)**
Jiao, Lü Qiong *See* **Wang, Ru Quan; et al., (81i:35135)**
Liu, Xue Zong *See* **Wang, Ru Quan; et al., (81i:35135)**
Wang, Ru Quan (*with* Liu, Xue Zong; Jiao, Lü Qiong; Gao, Zhi) Simplified Navier-Stokes equations and their mathematical characteristics. (Chinese. English summary) **(81i:35135)**

76L05 Shock waves and blast waves [See also 73D05.]

Adamson, T. C., Jr. (*with* Messiter, A. F.) Analysis of two-dimensional interactions between shock waves and boundary layers. **81k:76039**
Arya, J. C. *See* **Lardner, R. W., 81g:76076**
Barancev, R. G. (*with* Èngel'gart, V. N.) Asymptotic solution near the shock-layer separation point in hypersonic flow around blunted bodies. (Russian. English summary) **81b:76041**
Barenblatt, G. I. (*with* Guirguis, R. H.; Kamel, M. M.; Kuhl, A. L.; Oppenheim, A. K.; Zel'dovič, Ja. B.) Self-similar explosion waves of variable energy at the front. **81j:76063**
Barmin, A. A. (*with* Kulikovskiĭ, A. G.) Discontinuous solutions in mechanics of continua. **81g:76073**
Ben-Dor, G. Analytical solution of double-Mach reflection. **81g:76074**
Blohin, A. M. Well-posedness of a mixed problem for a nonstationary system of differential equations used in the numerical calculation of supersonic steady-state conical gas flows. (Russian) **81b:76042**
Chaturani, P. *See* **Kumar, S., 81d:76068**
Chong, T. H. *See* **Sirovich, L., 81d:76071**
Clarke, J. F. On the evolution of compression pulses in an exploding atmosphere: initial behaviour. **81g:76075**
Èngel'gart, V. N. *See* **Barancev, R. G., 81b:76041**
Filippenko, L. G. Corollaries of the Hugoniot equation. **81k:76040**
Gaur, Madhukar (*with* Sharma, Rishi Ram) Radiative heat transfer effects on the regular reflection of a shock wave from a rigid wall. (Turkish summary) **81a:76050**
Glimm, James G. (*with* Marchesin, Dan) Subgrid resolution of fluid discontinuities. **81a:76033**
(*with* Marchesin, Dan; McBryan, O.) Subgrid resolution of fluid discontinuities. II. **81k:76041**
Gottlieb, David *See* **Orszag, Steven A., 81g:76078**
Guirguis, R. H. *See* **Barenblatt, G. I.; et al., 81j:76063**
Hanin, M. *See* **Wolfshtein, M.; et al., (*See* 81j:76002)**
Ishii, R. Formation of the shock wave near the wave front of nonlinear waves. **81k:76042**
Janenko, N. N. *See* **Voroĭcov, E. V., 81h:76037**

Kamel, M. M. *See* **Barenblatt, G. I.; et al., 81j:76063**
Kiwan, Abdul R. Study of convergent flows in certain shaped charge systems. (*See* **80m:73002**)
Kuhl, A. L. *See* **Barenblatt, G. I.; et al., 81j:76063**
Kulikovskiĭ, A. G. *See* **Barmin, A. A., 81g:76073**
Kumar, S. (*with* Chaturani, P.) Strong cylindrical shock in a rotating gas. **81d:76068**
Kuz'min, A. V. (*with* Makarov, V. L.; Meladze, G. V.) A completely conservative difference scheme for equations of gas dynamics in Euler variables. (Russian) **81h:76043**
Lacetera, Janet E. (*with* Walters, William P.) Theoretical and experimental studies of hemispherical shaped-charge liners. (*See* **80m:73002**)
Lardner, R. W. (*with* Arya, J. C.) Two generalisations of Burgers' equation. (German summary) **81g:76076**
Liberman, M. A. *See* **Velikovič, A. L., 81h:76036**
Liu, S. W. (*with* Mirels, H.) Numerical solutions for unsteady laminar boundary layers behind blast waves. **81e:76051**
Logan, J. David (*with* Pérez, José de Jesús) Similarity solutions for reactive shock hydrodynamics. **81m:76030**
Makarov, V. L. *See* **Kuz'min, A. V.; et al., 81h:76043**
Marchesin, Dan *See* **Glimm, James G., 81a:76033** *and* **Glimm, James G.; et al., 81k:76041**
McBryan, O. *See* **Glimm, James G.; et al., 81k:76041**
Meladze, G. V. *See* **Kuz'min, A. V.; et al., 81h:76043**
Mesiter, A. F. *See* **Adamson, T. C., Jr., 81k:76039**
Mirels, H. *See* **Liu, S. W., 81e:76051**
Morro, A. Shock waves in thermoviscous fluids with hidden variables. **81k:76043**
Mortell, Michael P. *See* **Seymour, Brian R., 81j:76064**
Narusawa, Uichiro Utilization of the moment generating function in the kinetic solution of plane-shock structures. **81g:76077**
Ni, A. L. (*with* Ryžov, O. S.) The structure of relaxation zones behind a shock wave in chemically active gas mixtures. (Russian) **81d:76069**
Oppenheim, A. K. *See* **Barenblatt, G. I.; et al., 81j:76063**
Orszag, Steven A. (*with* Gottlieb, David) High resolution spectral calculations of inviscid compressible flows. **81g:76078**
Pérez, José de Jesús *See* **Logan, J. David, 81m:76030**
Piechór, K. Reflection of a weak shock wave from an isothermal wall. (Polish and Russian summaries) **81k:76044**
Pinkareva, M. V. (*with* Šugaev, F. V.) A special case of the density distribution behind an unsteady shock wave. (Russian) **81h:76035**
Putjatin, B. V. On the initial stage of a point explosion in a radiating gas. **81k:76045**
Reitman, V. *See* **Wolfshtein, M.; et al., (*See* 81j:76002)**
Rusanov, V. V. (*with* Šarakšane, A. A.) On the nonuniqueness of the solution of the problem on steady flow about the plane wedge and circular cone. **81d:76070**
Ryžov, O. S. *See* **Ni, A. L., 81d:76069**
Šarakšane, A. A. *See* **Rusanov, V. V., 81d:76070**
Seymour, Brian R. (*with* Mortell, Michael P.) A finite-rate theory of resonance in a closed tube: discontinuous solutions of a functional equation. **81j:76064**
Sharma, Rishi Ram *See* **Gaur, Madhukar, 81e:76050**
Šindjapin, G. P. Numerical solution of a problem of irregular reflection of a weak shock wave from a rigid wall in an ideal gas. (Russian) **81a:76034**
Singh, Verinder Pal Converging detonation waves. **81f:76031**
Sirovich, L. (*with* Chong, T. H.) Approximate solution in gasdynamics. **81d:76071**
Šugaev, F. V. *See* **Pinkareva, M. V., 81h:76035**
Velikovič, A. L. (*with* Liberman, M. A.) Shock waves in a transverse magnetic field. **81h:76036**
Vorožcov, E. V. (*with* Janenko, N. N.) On some algorithms for shock wave recognition by shock-capturing computational results. **81h:76037**
Walters, William P. *See* **Laceters, Janet E., (*See* 80m:73002)**
Wilkins, Mark L. Use of artificial viscosity in multidimensional fluid dynamic calculations. **81f:76032**
Wolfshtein, M. (*with* Reitman, V.; Hanin, M.) The interaction of an oblique shock wave with a flat plate boundary layer. (*See* **81j:76002**)
Zel'dovič, Ja. B. *See* **Barenblatt, G. I.; et al., 81j:76063**

secondary classifications:

Bernstein, Ira B. (*with* Book, David L.) Stability of the Primakoff-Sedov blast wave and its generalizations. **(81g:85005)**
Blokhin, A. M. A mixed problem for a system of equations of acoustics with boundary conditions on a shock wave. (Russian) **(81e:35083)**
Book, David L. *See* **Bernstein, Ira B., (81g:85005)**
Bujarbarua, S. (*with* Shukla, P. K.) Magnetosonic shocks in nonlinear dispersive media. **(81h:76069)**
Buning, P. G. *See* **Shang, J. S.; et al., (81g:76037)**
Cella, A. (*with* Lucchesi, M.; Pasquinelli, G.) Space-time elements for the shock wave propagation problem. **(81m:65168)**
Chang, Peter H. On the characterizations of the breakdown points of quasilinear wave equations. **(81i:35105)**
Dilmurodov, N. (*with* Muhammadiev, K.) Asymptotic behavior of the boundary between a gas and a liquid in motion of a pressure jump along the surface of a film of liquid. (Russian) **(81m:76011)**
Fowler, A. C. (*with* Larson, D. A.) On the flow of polythermal glaciers. II. Surface wave analysis. **(81a:86005)**
Gaur, Madhukar *See* **Sharma, Rishi Ram; et al., (81e:76095)**
Golubjatnikov, A. N. (*with* Kalamkarov, A. L.) Gravitational compression of a body with the formation of a shock wave. (Russian. Georgian and English summaries) **(81m:85005)**
Güttinger, W. Catastrophe geometry in physics: a perspective. **(81i:58017)**
Hankey, W. L. *See* **Shang, J. S.; et al., (81g:76037)**
Ishizuka, Toshihisa Propagation of a shock wave in general relativity. Stationary approximation. **(81d:76131)**
Kalamkarov, A. L. *See* **Golubjatnikov, A. N., (81m:85005)**
Karlsen, Lasse K. Computation of steady shocks by second-order finite-difference schemes. **(81j:65102)**
Kasiak, M. (*with* Włodarczyk, E.) Reflection of concentric spherical stress wave in elastic medium. (Polish and Russian summaries) **(81k:73018)**
Knorr, Georg (*with* Mond, Michael) The representation of shock-like solutions in an Eulerian mesh. **(81m:65148)**
Larson, D. A. *See* **Fowler, A. C., (81a:86005)**
Lerche, I. Mathematical theory of one-dimensional isothermal blast waves in a magnetic field. **(81i:76036)**
Lucchesi, M. *See* **Cella, A.; et al., (81m:65168)**
Mond, Michael *See* **Knorr, Georg, (81m:65148)**
Morro, A. Interaction of waves with shocks in magnetofluiddynamics. (German summary) **(81c:76054)**
Wave propagation in thermoviscous materials with hidden variables. (Polish and Russian summaries) **(81g:73123)**
Muhammadiev, K. *See* **Dilmurodov, N., (81m:76011)**
Pandey, B. D. *See* **Sharma, Rishi Ram, (81i:76027)**
Parker, D. F. The decay of sawtooth solutions to the Burgers equation. **(81d:35056)**
Pasquinelli, G. *See* **Cella, A.; et al., (81m:65168)**
Ranga Rao, Melam P. (*with* Yadav, Hira Lal) Some approximate analytical solutions for blast waves in solids. **(81f:73011)**
Ruggeri, Tommaso Interaction between a discontinuity wave and a shock wave: critical time for the fastest transmitted wave, example of the polytropic fluid. **(81m:35090)**
Shang, J. S. (*with* Buning, P. G.; Hankey, W. L.; Wirth, M. C.) Performance of a vectorized three-dimensional Navier-Stokes code on the CRAY-1 computer. **(81g:76037)**
Sharma, Rishi Ram (*with* Pandey, B. D.) On the growth and decay of acceleration waves in transient gas flows with vibrational relaxation. (German summary) **(81i:76027)**
(*with* Singh, H. N.; Gaur, Madhukar) On the growth and decay of discontinuities in relativistic magnetogasdynamics. **(81e:76095)**
Sharma, V. D. (*with* Shyam, Radhe) On the propagation of sonic waves in a dissociating gas. **(81f:76034)**
On the behaviour of weak discontinuities in an electrically conducting gas. **(81h:76063)**
Shukla, P. K. *See* **Bujarbarua, S., (81b:76069)**
Shyam, Radhe *See* **Sharma, V. D., (81f:76034)**
Singh, H. N. *See* **Sharma, Rishi Ram; et al., (81e:76095)**
Singh, J. B. *See* **Verma, B. G., (81f:76051)** *and* **Verma, B. G., (81i:76037)**
Turkel, Eli On the practical use of high-order methods for hyperbolic systems. **(81f:65074)**
Verma, B. G. (*with* Singh, J. B.) Self-similar magnetogasdynamic problems with radiative heat transfer. **(81f:76051)**
(*with* Singh, J. B.) Magnetogasdynamic converging spherical detonation waves. **(81i:76037)**
Williams, M. H. Unsteady thin airfoil theory for transonic flows with embedded shocks. **(81g:76069)**
Wirth, M. C. *See* **Shang, J. S.; et al., (81g:76037)**
Włodarczyk, E. *See* **Kasiak, M., (81k:73018)**
Yadav, Hira Lal *See* **Ranga Rao, Melam P., (81f:73011)**

76M05 Nonhomentropic flows of compressible fluids

secondary classifications:

Ingraffea, Anthony R. (*with* Manu, Corneliu) Stress-intensity factor computation in three dimensions with quarter-point elements. **(81m:73017)**
Manu, Corneliu *See* **Ingraffea, Anthony R., (81m:73017)**

76Nxx Compressible fluids and gas dynamics, general

76N05 Boundary layer theory

Bahi, R. An application of Keller's method to the solution of an eighth-order nonlinear boundary value problem. **81e:76052**
Husnutdinova, N. V. Conditions for the continuability of a boundary layer in a gas. (Russian) **81e:76053**

secondary classifications:

Liu, S. W. (*with* Mirels, H.) Numerical solutions for unsteady laminar boundary layers behind blast waves. **(81e:76051)**
Mirels, H. *See* **Liu, S. W., (81e:76051)**
Stewartson, Keith High Reynolds-number flows. **(81e:76036)**

76N10 Compressible fluids, general

Aoyama, Kuniaki *See* **Mori, Atsunobu; et al., 81g:76080**
Bai, Dong Hua *See* **Sun, Shun Hua, 81h:76039**
Brandt, Achi (*with* Dendy, J. E., Jr.; Ruppel, Hans) The multigrid method for semi-implicit hydrodynamics codes. **81g:76079**
Bytev, V. O. Some possible state equations of a purely mechanical continuum. (Russian) **81f:76033**
Daniel, W. J. T. Modal methods in finite element fluid-structure eigenvalue problems. **81e:76054**
Dendy, J. E., Jr. *See* **Brandt, Achi; et al., 81g:76079**
Gerasimenko, L. V. (*with* Pavlov, B. M.) Application of the Navier-Stokes equations to the study of flows of a viscous gas in a Laval nozzle. (Russian) **81a:76035**

Hirt, C. W. (*with* Nichols, B. D.) Adding limited compressibility to incompressible hydrocodes. **81b:76044**

Kaiser, J. E. *See* **Nayfeh, Ali Hasan; et al., 81a:76036**

Kaneda, Yukio A generalization of Faxén's theorem to nonsteady motion of an almost spherical drop in an arbitrary flow of a compressible fluid. **81d:76072**

Kaniel, Shmuel Approximation of the hydrodynamic equations by a transport process. **81d:76073**

Le Balleur, Jean-Claude (*with* Peyret, R.; Viviand, Henri) Numerical studies in high Reynolds number aerodynamics. **81d:76074**

Mahviladze, G. M. (*with* Ščerbak, S. B.) A numerical method for investigation of non-steady-state spatial motions of a compressible gas. (Russian. Bulgarian and English summaries) **81h:76038**

McAllister, G. T. (*with* Rohde, S. M.; McAllister, Marialuisa N.) Optimal bearing designs for one-dimensional problems with compressible lubricants. **81b:76045**

McAllister, Marialuisa N. *See* **McAllister, G. T.; et al., 81b:76045**

Mori, Atsunobu (*with* Aoyama, Kuniaki; Mori, Haruo) Influence of the gas-film inertia forces on the dynamic characteristics of externally pressurized, gas lubricated journal bearings. I. Proposal of governing equations. **81g:76080**

Mori, Haruo *See* **Mori, Atsunobu; et al., 81g:76080**

Morioka, Shigeki Steady two-dimensional jet-flow of a dispersive compressible fluid. **81e:76055**

Nayfeh, Ali Hasan (*with* Shaker, B. S.; Kaiser, J. E.) Transmission of sound through nonuniform circular ducts with compressible mean flows. **81a:76036**

Nichols, B. D. *See* **Hirt, C. W., 81b:76044**

Pavlov, B. M. *See* **Gerasimenko, I. V., 81a:76035**

Penkert, Horst The study of the motions of a compressible fluid determined from the point source by a perturbation. (Romanian. German summary) **81e:76031**

Peyret, R. *See* **Le Balleur, Jean-Claude; et al., 81d:76074**

Rohde, S. M. *See* **McAllister, G. T.; et al., 81b:76045**

Ruppel, Hans *See* **Brandt, Achi; et al., 81g:76079**

Ščerbak, S. B. *See* **Mahviladze, G. M., 81h:76038**

Shaker, B. S. *See* **Nayfeh, Ali Hasan; et al., 81a:76036**

Sun, Shun Hua (*with* Bai, Dong Hua) A prediction problem in theory of fluid dynamics in naturally fractured reservoirs. **81h:76039**

Viviand, Henri *See* **Le Balleur, Jean-Claude; et al., 81d:76074**

Yih, Chia Shun Flows with condensation. **81c:76032**

\ secondary classifications:

Antia, H. M. (*with* Chitre, S. M.) Stability of magneto-acoustic waves in a thermally conducting compressible fluid. **(81a:76048)**

Aslanjan, A. G. A formula for the number of frequencies of the oscillations of a shell filled with a fluid. (Russian) **(81a:73038)**

Book, David L. Convective instability of self-similar spherical expansion into a vacuum. **(81c:76022)**

Burikin, O. Ja. Mixed problem in a half-space with a gap for an equation of propagation of sound in a viscous gas. (Russian) **(81c:76035)**

Carver, Michael B. Pseudo characteristic method of lines solution of the conservation equations. **(81a:65115)**

Chitre, S. M. *See* **Antia, H. M., (81a:76048)**

Ford, Wayne T. (*with* Fuente, Maria C.; Waid, Margaret C.) Porous media problems. **(81a:76043)**

Friedman, Avner (*with* Turkington, Bruce) Asymptotic estimates for an axisymmetric rotating fluid. **(81h:76058)**

Fromme, Joseph A. (*with* Golberg, Michael A.) Numerical solution of a class of integral equations arising in two-dimensional aerodynamics. **(81a:65120)**

(*with* Golberg, Michael A.) Numerical solution of a class of integral equations arising in two-dimensional aerodynamics—the problem of flaps. **(81a:65121)**

Fuente, Maria C. *See* **Ford, Wayne T.; et al., (81a:76043)**

Gibbons, M. P. On diffusive instabilities of a rapidly rotating electrically conducting layer of compressible fluid of varying depth. **(81a:76024)**

Golberg, Michael A. *See* **Fromme, Joseph A., (81a:65120)** *and* **Fromme, Joseph A., (81a:65121)**

Hong, S. H. *See* **Wilhelm, H. E., (81g:76003)**

Kluwick, A. (*with* Stross, N.) Unsteady, turbulent flow in pipes. (German summary) **(81e:76048)**

Morice, Philippe (*with* Viviand, Henri) Équations de conservation et condition d'irréversibilité pour les écoulements transsoniques potentiels. (English summary) **(81k:35104)**

Morris, Philip J. *See* **Tam, Christopher K. W., (81d:76085)**

Pavlov, E. G. Optimal control of a perfectly conducting compressible fluid column. **(81d:93028)**

Schmitt, James A. Truncation error terms in the kinetic energy calculation in the HELP algorithm and their consequences. **(81e:65066)**

Stross, N. *See* **Kluwick, A., (81e:76048)**

Tam, Christopher K. W. (*with* Morris, Philip J.) The radiation of sound by the instability waves of a compressible plane turbulent shear layer. **(81d:76085)**

Ton, Bui An On the initial value problem for compressible fluid flows with vanishing viscosity. **(81e:35107)**

Turkington, Bruce *See* **Friedman, Avner, (81h:76058)**

Viviand, Henri *See* **Morice, Philippe, (81k:35104)**

Waid, Margaret C. *See* **Ford, Wayne T.; et al., (81a:76043)**

Wilhelm, H. E. (*with* Hong, S. H.) Stress relaxation waves in fluids. **(81g:76003)**

76N15 Gas dynamics, general

Aswarthanarayana, C. *See* **Purushotham, G., 81i:76026**

Bellamy-Knights, P. G. Viscous compressible heat conducting spiralling flow. **81k:76046**

(Belocerkovskiĭ, O. M.) *See* **Direct numerical simulation of gas flows, 81g:76084**

Bogdanova, E. V. Spreading of a sonic flow of a viscous heat-conducting gas at the edge of a cylinder. (Russian) **81i:76024**

Čerepanov, V. Ju. *See* **Čerepanova, T. A., 81b:76046**

Čerepanova, T. A. (*with* Čerepanov, V. Ju.) The description of gas-dynamic and heat processes in reactors in connection with epitaxy of monocrystalline films from gaseous phase. (Russian. English summary) **81b:76046**

Četveruškin, B. N. *See* **Volčinskaja, M. I., 81e:76057**

Chattot, J. J. Méthode variationnelle pour les problèmes hyperboliques et mixtes du premier ordre. **81k:76047**

Chorin, Alexandre Joel Random choice methods with applications to reacting gas flow. **81d:76075**

Čitašvili, R. Ja. *See* **Devdariani, R. G.; et al., 81h:76040**

Danilov, Ju. M. (*with* Kondrat'ev, V. V.) Calculation of mixed subsonic and supersonic gas flow in channels of complex form with partially permeable wall. **81i:76025**

Devdariani, R. G. (*with* Čitašvili, R. Ja.; Hmaladze, Š. E.) A problem of optimal control of transient gas flow. (Russian. Georgian and English summaries) **81h:76040**

Falcovitz, J. *See* **Kaniel, Shmuel, 81m:76031**

Favorskiĭ, A. P. Variational-discrete models of the equations of hydrodynamics. (Russian) **81j:76065**

Gustafsson, Bertil (*with* Wahlund, Per) Finite-difference methods for computing the steady flow about blunt bodies. **81j:76066**

Hmaladze, Š. E. *See* **Devdariani, R. G.; et al., 81h:76040**

Jagudin, S. V. *See* **Mazurov, A. P., 81j:76068**

Janickiĭ, V. E. *See* **Sedova, E. S., (*See* 81g:76084)**

Kaniel, Shmuel (*with* Falcovitz, J.) Transport approach for compressible flow. **81m:76031**

Každan, Ja. M. *See* **Žitnikov, Ju. V., 81g:76083**

Kažikhov, A. V. (*with* Nikolaev, V. B.) Correctness of boundary value problems for equations of gas dynamics with a nonmonotone state function. (Russian) **81e:76056**

Kondrat'ev, V. V. *See* **Danilov, Ju. M., 81i:76025**

Kuz'min, A. V. (*with* Makarov, V. L.; Meladze, G. V.) Completely conservative three-layer difference schemes for gas dynamics equations in Euler variables. (Russian. Georgian and English summaries) **81j:76067**

(Lavrent'ev, M. A.) *See* **Theoretical and applied mechanics, 81k:76048**

Makarov, V. L. *See* **Kuz'min, A. V.; et al., 81j:76067**

Markeev, B. M. On isothermal gas flow between parallel planes with arbitrary tangential momentum accommodation. **81d:76076**

Mazurov, A. P. (*with* Jagudin, S. V.) Calculation of nonviscous flows in axially symmetric jets without external flow. (Russian) **81j:76068**

Meladze, G. V. *See* **Kuz'min, A. V.; et al., 81j:76067**

Menon, V. V. (*with* Sharma, V. D.) Correction to a paper of R. Ram concerning the behaviour of the solution of the Bernoulli equation: "A modification in the theorem of Bailey and Chen" [Nuovo Cimento B (11) **48** (1978), no. 1, 9–14; MR 80b:80008]. (Italian and Russian summaries) **81j:76069**

(Mikhilov, G. K.) *See* **Theoretical and applied mechanics, 81k:76048**

Moskal'kov, M. N. A completely conservative scheme of gas dynamics. (Russian) **81d:76077**

Nikolaev, V. B. *See* **Kažikhov, A. V., 81e:76056**

Oliger, Joseph On the initial-boundary value problem for the equations of gas dynamics. **81g:76081**

Pandey, B. D. *See* **Sharma, Rishi Ram, 81i:76027**

Pert, G. J. Self-similar flows with uniform velocity gradient and their use in modelling the free expansion of polytropic gases. **81j:76070**

Purushotham, G. (*with* Aswarthanarayana, C.) On vortex-line geometry in pseudostationary spatial gas flows. **81i:76026**

Saltanov, M. V. Generalization of a variational principle of hydrodynamics in the Euler representation. (Russian) **81j:76071**

Sedova, E. S. (*with* Janickiĭ, V. E.) Numerical experiments in the investigation of properties of a statistical model of an ideal gas flow. (Russian) (*See* **81g:76084**)

Sharma, Rishi Ram (*with* Pandey, B. D.) On the growth and decay of acceleration waves in transient gas flows with vibrational relaxation. (German summary) **81i:76027**

See also **Menon, V. V.; et al., 81j:76069**

Sharma, V. D. (*with* Shyam, Radhe) On the propagation of sonic waves in a dissociating gas. **81f:76034**

See also **Menon, V. V., 81j:76069**

Shyam, Radhe *See* **Sharma, V. D., 81f:76034**

Summers, D. Polytropic solutions to the problem of spherically symmetric flow of an ideal gas. (French summary) **81g:76082**

Taran, M. D. The method of particles of finite size for modeling of two-dimensional problems of gas dynamics. (Russian) **81h:76041**

Volčinskaja, M. I. (*with* Četveruškin, B. N.) Solution of two-dimensional non-steady-state problems of radiative gas dynamics. (Russian) **81e:76057**

Wahlund, Per *See* **Gustafsson, Bertil, 81j:76066**

Žitnikov, Ju. V. (*with* Každan, Ja. M.) Convergence of a cylindrical wave of rarefaction to an axis. (Russian. English summary) **81g:76083**

Delft ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **81k:76048**

Direct numerical simulation of gas flows ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **81g:76084**

Gas dynamics ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **81g:76084**

IUTAM Congress:

Theoretical and Applied Mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **81k:76048**

Mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **81k:76048**

Numerical simulation ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **81g:76084**

Theoretical and applied mechanics ★Теоретическая и прикладная механика. (Russian) [Theoretical and applied mechanics] **81k:76048**

secondary classifications:

Blohin, A. M. A mixed problem for a system of equations of acoustics with boundary conditions on a shock wave. (Russian) **(81e:35083)**
Bondarev, È. A. (*with* Šadrina, A. P.) A numerical method for solving one-dimensional problems of nonisothermic gas filtration. (Russian) **(81a:76042)**
Chong, T. H. *See* **Sirovich, L., (81d:76071)**
Chu, C. K. Numerical methods in fluid dynamics. **(81e:76001)**
Gaur, Madhukar *See* **Sharma, Rishi Ram; et al., (81g:76128)**
Ishii, R. Formation of the shock wave near the wave front of nonlinear waves. **(81k:76042)**
Königl, Arieh Relativistic gasdynamics in two dimensions. **(81d:76132)**
Krishnan, E. V. An appendix to the paper: "Approximation of the perturbation equations of a quasi-linear hyperbolic system in the neighborhood of a bicharacteristic" [J. Math. Anal. Appl. **50** (1975), 470–482; MR **52** #11342] by Phoolan Prasad. **(81h:35032)**
Latinopoulos, P. (*with* Tolikas, D.) Propagation of acoustic waves in ducts with varying cross sections and viscous mean flow. **(81f:76036)**
Liu, Tai Ping Quasilinear hyperbolic systems. **(81b:35051)**
Luskin, Mitchell A finite element method for first-order hyperbolic systems. **(81i:65092)**
Matsumura, Akitaka (*with* Nishida, Takaaki) The initial value problem for the equations of motion of viscous and heat-conductive gases. **(81g:35108)**
Nishida, Takaaki *See* **Matsumura, Akitaka, (81g:35108)**
Pao, C. V. On the blowing-up behavior of solutions for a parabolic boundary value problem. **(81i:35084)**
(Prasad, Phoolan) *See* **Krishnan, E. V., (81h:35032)**
Šadrina, A. P. *See* **Bondarev, È. A., (81a:76042)**
Samarskaja, E. A. Iteration methods for solving difference equations of gas dynamics. (Russian) **(81a:65118)**
Sharma, Rishi Ram (*with* Singh, H. N.; Gaur, Madhukar) The growth and decay of weak waves in relativistic flows of dissociating gases. **(81g:76128)**
Sinai, Y. L. The generation of combustion noise by chemical inhomogeneities in steady, low-Mach-number duct flows. **(81g:76091)**
Singh, H. N. *See* **Sharma, Rishi Ram; et al., (81g:76128)**
Sirovich, L. (*with* Chong, T. H.) Approximate solution in gasdynamics. **(81d:76071)**
Tolikas, D. *See* **Latinopoulos, P., (81f:76036)**
Tsai, Morgan S. Harmonic linearization method for high-intensity sound in two-dimensional lined ducts. **(81h:76046)**
Warren, F. W. Restrictions upon instabilities of plane and helical gas flows. **(81k:76032)**
Xiao, Ling *See* **Zhang, Tong, (81g:35078)**
Zhang, Tong (*with* Xiao, Ling) A Riemann problem for the system of conservation laws of aerodynamics without convexity. (Chinese. English summary) **(81g:35078)**

76N99 None of the above, but in this section

Belocerkovskiĭ, O. M. Computational experiment: direct numerical simulation of complex gas-dynamics flows on the basis of Euler, Navier-Stokes, and Boltzmann models. (*See* **80e:76002**)
Čarahč'jan, A. A. (*with* Šmyglevskiĭ, Ju. D.) Numerical methods in radiative gas dynamics. (Russian) **81k:76049**
Colrier, Jean Régimes transitoires et excitations non périodiques pour les fluctuations d'un gaz visqueux et compressible dans une conduite. (English summary) **81m:76032**
Habashi, Wagdi G. Numerical methods of turbomachinery. (*See* **81j:76002**)
Hicks, Darrell L. The hydrocode convergence problem. I. **81k:76050a**
The hydrocode convergence problem. II. **81k:76050b**
Shepherd, J. J. On the asymptotic solution of the Reynolds equation. **81e:76058**
Šmyglevskiĭ, Ju. D. Variational problems of gas dynamics. (Russian) **81k:76051**
See also **Čarahč'jan, A. A., 81k:76049**
Trad, Ahmed Ondes thermo-acoustiques visqueuses et ondes entropiques dans un tube poreux. (English summary) **81m:76033**

secondary classifications:

Čeremisin, F. G. *See* **Rykov, V. A.; et al., (81k:76054)**
Hanin, M. *See* **Wolfshtein, M.; et al., (*See* 81j:76002)**
Reitman, V. *See* **Wolfshtein, M.; et al., (*See* 81j:76002)**
Rykov, V. A. (*with* Čeremisin, F. G.; Šahov, E. M.) Numerical investigations in rarefied gas dynamics. (Russian) **(81k:76054)**
Šahov, E. M. *See* **Rykov, V. A.; et al., (81k:76054)**
Wolfshtein, M. (*with* Reitman, V.; Hanin, M.) The interaction of an oblique shock wave with a flat plate boundary layer. (*See* **81j:76002**)

76P05 Rarefied gas flows, Boltzmann equation [See also 82A05.]

Belocerkovskiĭ, O. M. (*with* Erofeev, A. I.; Janickiĭ, V. E.) A nonstationary method for direct statistical simulation of rarefied gas flows. (Russian) **81k:76052**
Burnister, E. E. *See* **Siewert, C. E., 81b:76049**
Caflisch, Russel E. The fluid dynamic limit of the nonlinear Boltzmann equation. **81j:76072**
Čeremisin, F. G. *See* **Rykov, V. A.; et al., 81k:76054**
Erofeev, A. I. *See* **Belocerkovskiĭ, O. M.; et al., 81k:76052**
Hlopov, Ju. I. The drag on a sphere in a low-velocity flow of rarefied gas. **81b:76047**
Ivanov, S. G. (*with* Janšin, A. M.) Forces and moments acting on bodies rotating about a symmetry axis in a free molecular flow. **81k:76053**
Jalamov, Ju. I. *See* **Pasternak, V. E.; et al., 81k:76042**
Janickiĭ, V. E. *See* **Belocerkovskiĭ, O. M.; et al., 81k:76052**
Janšin, A. M. *See* **Ivanov, S. G., 81k:76053**
Julkanov, A. A. *See* **Pasternak, V. E.; et al., 81h:76042**
Kawashima, Shuichi (*with* Matsumura, Akitaka; Nishida, Takaaki) On the fluid-dynamical approximation to the Boltzmann equation at the level of the Navier-Stokes equation. **81b:76048**
Matsumura, Akitaka *See* **Kawashima, Shuichi; et al., 81b:76048**
Nishida, Takaaki *See* **Kawashima, Shuichi; et al., 81b:76048**
Pasternak, V. E. (*with* Senkevič, A. A.; Julkanov, A. A.; Jalamov, Ju. I.) Thermal slip of a moderately dense gas along a flat surface. **81h:76042**
Rykov, V. A. (*with* Čeremisin, F. G.; Šahov, E. M.) Numerical investigations in rarefied gas dynamics. (Russian) **81k:76054**
(Ryžov, O. S.) *See* **Numerical methods in the dynamics of rarefied gases, 81i:76028a**
Šahov, E. M. Intense point source explosion in rarefied gas. (Russian) **81i:76028b**
See also **Rykov, V. A.; et al., 81k:76054**
Senkevič, A. A. *See* **Pasternak, V. E.; et al., 81h:76042**
Siewert, C. E. (*with* Burniston, E. E.) The H matrix for time-dependent problems in rarefied gas dynamics. (German summary) **81b:76049**
Gas dynamics ★Численные методы в динамике разреженных газов. Вып. 4. (Russian) [Numerical methods in the dynamics of rarefied gases. No. 4] **81i:76028a**
Numerical methods in the dynamics of rarefied gases ★Численные методы в динамике разреженных газов. Вып. 4. (Russian) [Numerical methods in the dynamics of rarefied gases. No. 4] **81i:76028a**

secondary classifications:

Bakanov, S. P. (*with* Derjagin, B. V.; Roldugin, V. I.) Thermophoresis in gases. **(81g:82033)**
(Belocerkovskiĭ, O. M.) *See* **Direct numerical simulation of gas flows, (81g:76084)**
Čeremisin, F. G. *See* **Žurin, V. V., (*See* 81i:68009)**
Derjagin, B. V. *See* **Bakanov, S. P.; et al., (81g:82033)**
Ghidouche, Hamid *See* **Ukai, Seiji; et al., (81i:45018)**
Point, Nelly *See* **Ukai, Seiji; et al., (81i:45018)**
Ramanathan, G. V. Generalized Boltzmann equation for many-body distributions. (Italian and Russian summaries) **(81i:82035)**
Roldugin, V. I. *See* **Bakanov, S. P.; et al., (81g:82033)**
Simons, S. Is the solution of the Boltzmann equation positive? **(81i:82037)**
Sobel, Michael I. Kinetic theory derivation of the adiabatic law for ideal gases. **(81i:82038)**
Tarunin, E. L. Flow of a viscous fluid in a closed cavity in the presence of slip effects. **(81f:76018)**
Ukai, Seiji (*with* Point, Nelly; Ghidouche, Hamid) Sur la solution globale du problème mixte de l'équation de Boltzmann nonlinéaire. **(81i:45018)**
Žurin, V. V. (*with* Čeremisin, F. G.) Recent advances in the numerical solution of the Boltzmann equation. (*See* **81i:68009**)
Direct numerical simulation of gas flows ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **(81g:76084)**
Gas dynamics ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **(81g:76084)**
Numerical simulation ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **(81g:76084)**

76Q05 Hydrodynamic sound, acoustics

Abugov, D. I. (*with* Obrezkov, O. I.) Acoustic wave generation and amplification by thermal processes. I. Basic relations of thermoacoustics. **81k:76055**
Ahluwalia, Daljit S. (*with* Reiss, Edward L.; Stickler, David C.) Sound propagation in a temporally varying waveguide. **81k:76056**
Anand, G. V. *See* **Kalyanasundaram, N., 81e:76060**
Baštovoi, V. G. (*with* Krakov, M. S.) Excitation of sound in a magnetizable fluid. **81g:76085**
Baumeister, K. J. (*with* Majjigi, R. K.) Applications of velocity potential function to acoustic duct propagation using finite elements. **81a:76037**
Bendat, J. S. Modern analysis procedures for multiple input/output problems. **81e:76059**
Berača, R. J. Sound reduction by barriers in rooms. (German and French summaries) **81d:76078**
Bezručenko, L. I. (*with* Zaljaljutdinov, A. R.) Diffraction of acoustic-gravitational waves around the spherical earth. (Russian) **81k:76043**
Blaser, D. A. *See* **Chung, J. Y., 81g:76086**
Block, Patricia J. W. *See* **Tam, Christopher K. W., 81e:76065**
Borovikov, V. A. Diffraction by a wedge with curved faces. **81c:76034**
Boström, Anders Transmission and reflection of acoustic waves by an obstacle in a waveguide. **81d:76079**
Burikin, O. Ja. Mixed problem in a half-space with a gap for an equation of propagation of sound in a viscous gas. (Russian) **81c:76035**
Cavanagh, E. (*with* Cook, B. D.) Gaussian-Laguerre description of ultrasonic fields—numerical example: circular piston. **81a:76038**
Chung, J. Y. (*with* Blaser, D. A.) Transfer function method of measuring in-duct acoustic properties. I. Theory. **81g:76086**
Cook, B. D. *See* **Cavanagh, E., 81a:76038**
Disselhorst, J. H. M. (*with* van Wijngaarden, L.) Flow in the exit of open pipes during acoustic resonance. **81g:76087**
Eversman, W. The transmission of sound in nonuniform ducts using a modified Galerkin method. (*See* **81a:76005**)
Fabrikant, A. L. *See* **Golemitok, G. M., 81i:76029**
Filippi, P. *See* **Saadat, H., 81m:76035**
Frisk, George V. *See* **Macpherson, Mark K., 81g:76090**
Galant, D. C. *See* **Koutsoyannis, S. P.; et al., 81j:76073**
Gaudefroy, Alain Optimisation de l'énergie acoustique au moyen de sources secondaires. (English summary) **81a:76039**
Gaunaurd, G. (*with* Überall, H.) R-matrix theory of sound scattering from fluid spheres via the Mittag-Leffler expansion. **81k:76057**
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Abarbanel, Henry D. I. Scattering from a random surface. **(81k:78010)**

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Bronnikov, K. A. Gravitational and sound waves in stiff matter. **(81i:83021)**

Delft, Percy Applications of a commutation formula. **(81g:47001)**

Ètkin, V. S. *See* **Voljak, K. I., (81f:76011)**

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Ginsberg, J. H. Two-dimensional finite amplitude acoustic waves radiating from a flat plate in arbitrary periodic vibration. (French summary) **(81e:73058)**

Gubanov, V. A. Diffraction of surface acoustic waves by a conducting half-plane. **(81k:73062)**

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Morishita, Katsumi (*with* Kumagai, Nobuaki) Systematic derivation of variational expressions for electromagnetic and/or acoustic waves. **(81j:78015)**

Nayfeh, Ali Hasan (*with* Shaker, B. S.; Kaiser, J. E.) Transmission of sound through nonuniform circular ducts with compressible mean flows. **(81a:76036)**

Neppiras, E. A. Acoustic cavitation. **(81j:76007)**

Nusayr, Abdul-Majid Propagation of waves in rectangular ducts with sinusoidal undulations. **(81m:76014)**

Otsuki, Takuro Diffraction by a rectangular aperture. **(81d:78027)**

Pelinovskiĭ, E. N. (*with* Petuhov, Ju. V.; Fridman, V. E.) Approximate equations for the propagation of strong acoustic signals in the ocean. **(81e:86004)**

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(Vesecky, John F.) *See* **Bass, F. G.; et al., (81j:78016)**

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Poležaev, V. I. *See* **Brailovskaja, V. A.; et al., (81f:76043)**
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Tzivanidis, G. J. *See* **Kafousias, N. G.; et al., (81c:76053)**
Walton, I. C. The stability of free convection in a horizontal cylindrical annulus. **(81j:76034)**

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Brooks, A. *See* **Hughes, Thomas J. R., 81f:76040**
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Hughes, Thomas J. R. (*with* Brooks, A.) A multidimensional upwind scheme with no crosswind diffusion. **81f:76040**
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Steven, G. P. Finite element solution for a fluid subject to thermal and buoyancy effects. (*See* **81a:76005**)

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Wilson, N. W. (*with* Srivastava, P. K.) Buoyancy effects on heat and momentum transfer during the melting of a horizontal ice sheet above fresh water flowing at laminar Reynolds numbers. (*See* **81j:76001**)

Wilson, Rodney K. (*with* Aifantis, Elias C.) A coupled diffusion-deformation theory. (*See* **81m:73010**)

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Čistjakov, V. K. *See* **Pudovkin, M. A.; et al., (81j:86005)**

Finn, W. D. Liam *See* **Varoğlu, Erol, (81a:65107)**

Fomin, S. A. *See* **Pudovkin, M. A.; et al., (81j:86005)**

Frolov, A. V. Two-parameter model of the steady-state thermocline in the ocean. **(81k:86003)**

Golicyn, G. S. Geostrophic convection. (Russian) **(81j:86004)**

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Golant, V. E. (*with* Žilinskiĭ, A. P.; Saharov, I. E.) ★Fundamentals of plasma physics. **(81c:82018)**
Gradov, O. M. (*with* Stenflo, L.) Magnetic field instability of a plasma in a beam of electromagnetic radiation. **(81f:82024)**
Green, James *See* **Buneman, O.; et al., (81j:65022)**
Guillopé, C. Remarques sur un problème de valeurs propres non linéaires faisant intervenir des fonctions non différentiables. **(81i:35132)**
Haken, H. (*with* Klenk, H.) A new approach to bifurcation theory with numerical applications to convection instabilities in plasmas. **(81k:76025)**
Ilčenko, A. S. Interaction of nonrelativistic electrons with radiation in a magnetic field. **(81h:85012)**
Jancovici, B. Diamagnetism of an electron gas and surface currents. **(81d:82045)**
Kalmykova, S. S. On the question of the conditions of space charge wave radiation. (Russian. English summary) **(81h:78008)**
Klenk, H. *See* **Haken, H., (81k:76025)**
Klimas, Alexander *See* **Cooper, Jeffery, (81h:78004)**
(Landau, Lev D.) *See* **Liflic, E. M.; et al., (81h:82001)**
Lehner, T. *See* **Schmitt, J. P. M., (81g:82051)**
Letavin, M. I. On the problem of control of charged particle beams with account taken of their own charge. (Russian) **(81h:78009)**
Liberman, M. A. *See* **Velikovič, A. L., (81h:76036)**
Liflic, E. M. (*with* Pitaevskiĭ, L. P.) ★Теоретическая физика ("Ландау-Лифшиц"). Том 10. (Russian) [Theoretical physics ("Landau-Liflic"). Vol. 10] **(81k:82001)**
Lominadze, D. G. (*with* Mihaĭlovskiĭ, A. B.; Sagdeev, R. Z.) Langmuir turbulence of a relativistic plasma in a strong magnetic field. **(81h:82009)**
Mancini, Giovanni *See* **Ambrosetti, Antonio, (81k:35164)**
Maslov, V. P. (*with* Mosolov, P. P.) Asymptotic behavior as $N \to \infty$ of trajectories of N point masses, interacting according to Newton's gravitation law. (Russian) **(81h:70005)**
Mense, A. T. *See* **Emmert, G. A.; et al., (81h:76061)**
Messiter, A. F. *See* **Adamson, T. C., Jr., (81k:76039)**
Mihaĭlovskiĭ, A. B. *See* **Lominadze, D. G.; et al., (81h:82009)**
Miller, Guthrie Stability of the noncircular screw pinch. **(81k:76027)**
Minelli, T. A. (*with* Pusterla, M.; Roberty, N. C.) Analytical approximate solutions of the nonlinear basic equations in classical physics. **(81h:34011)**
Morro, A. Interaction of waves with shocks in magnetofluiddynamics. (German summary) **(81c:76054)**
Mosolov, P. P. *See* **Maslov, V. P., (81h:70005)**
Nielsen, Dale *See* **Buneman, O.; et al., (81j:65022)**
O'Neil, T. M. Cooling of a pure electron plasma by cyclotron radiation. **(81c:82021)**
Pao, Young Ping · *See* **Wen, Shih Liang, (81b:76073)**
Patel, L. A. *See* **Sodha, M. S., (81h:78003)**
Pitaevskiĭ, L. P. *See* **Liflic, E. M., (81k:82001)**
Poljudov, A. N. Computer realization of macroparticle models. (Russian. English summary) **(81a:82035)**
Potapenko, I. F. (*with* Čujanov, V. A.) Completely conservative difference schemes for a two-dimensional Landau equation. (Russian) **(81k:82037)**
Prosperetti, Andrea The motion of a charged particle in a uniform magnetic field. (Italian and Russian summaries) **(81g:78017)**
Pusterla, M. *See* **Minelli, T. A.; et al., (81h:34011)**
Rappaz, J. Spectral approximation by finite elements of a problem of MHD-stability of a plasma. **(81c:76023)**
Roberty, N. C. *See* **Minelli, T. A.; et al., (81h:34011)**
Rowlands, G. Charged particle orbits in helical magnetic fields. **(81f:78008)**
Ryžov, Ju. A. Mean electromagnetic field in a randomly inhomogeneous medium. **(81h:78016)**
Sagdeev, R. Z. *See* **Lominadze, D. G.; et al., (81h:82009)**
Saharov, I. E. *See* **Golant, V. E.; et al., (81c:82018)**
Saito, T. *See* **Shimojo, T., (81f:82027)**
Savo, Bonaventura Analytical solutions of the sine-Gordon equation and their application to Josephson tunnel junctions. **(81i:35151)**
Schmitt, J. P. M. (*with* Lehner, T.) Fluctuations in the ion-cyclotron-frequency range: possible measurement of T_e/T_i in tokamaks. **(81g:82051)**
Shimojo, T. (*with* Saito, T.) Linear-response theory for an impinged charged particle in turbulent plasma. (Italian and Russian summaries) **(81f:82027)**
Sjöbrand, J. Bifurcation analysis of a nonlinear free boundary problem from plasma physics. **(81c:35008)**
Singh, R. M. (*with* Singh, R. P.; Singh, Y.) On the behavior of the short-range pair correlation function in a mixture of two-component plasma. **(81i:82050)**
Singh, R. P. *See* **Singh, R. M.; et al., (81i:82050)**
Singh, Y. *See* **Singh, R. M.; et al., (81i:82050)**
Sodha, M. S. (*with* Patel, L. A.) Self-focusing of a laser beam in a magnetoplasma. (French summary) **(81h:78003)**
Stakgold, I. Gradient bounds for plasma confinement. **(81k:35022)**
Stenflo, L. *See* **Gradov, O. M., (81f:82024)**
Tapiéro, R. *See* **Bourgeat, A., (81a:65114)**
Ul'trivanov, I. P. Boundary control of a string of plasma with distributed flow. (Russian) **(81e:93073)**
(Uslenghi, Piergiorgio L. E.) *See* **Nonlinear electromagnetics, (81j:78001)**
Vaclavik, J. *See* **Appert, K., (81m:82029)**
(Vedeneeva, K. Z.) *See* **Golant, V. E.; et al., (81c:82018)**
Velikovič, A. L. (*with* Liberman, M. A.) Shock waves in a transverse magnetic field. **(81h:76036)**
Weiss, I. *See* **Cuperman, S.; et al., (81g:85007)**
Wen, Shih Liang (*with* Pao, Young Ping) Rotation of a classical toroidal plasma. **(81b:76073)**
Wieland, R. M. *See* **Emmert, G. A.; et al., (81h:76061)**
Zhang, Cheng Fu The effect on finite ion Larmor radius on the eigenmodes of drift waves. (Chinese. English summary) **(81j:82034)**
Žilinskiĭ, A. P. *See* **Golant, V. E.; et al., (81c:82018)**
Electromagnetics ★Nonlinear electromagnetics. **(81j:78001)**
Nonlinear electromagnetics ★Nonlinear electromagnetics. **(81j:78001)**

76Y05 Quantum hydrodynamics and relativistic hydrodynamics [See also 83C55, 85A30.]

Agop, M. *See* **Merches, I., 81j:76113**
Andreev, A. F. (*with* Kosevič, Ju. A.) Kinetic phenomena in semiquantum liquids. **81h:76073**
Carini, Giovanni On the theory of wave fronts in the relativistic dynamics of an ideal heat-conducting fluid. (Italian) **81h:76074**
Gaur, Madhukar *See* **Sharma, Rishi Ram; et al., 81e:76095** *and* **Sharma, Rishi Ram; et al., 81g:76128**
Giambò, Sebastiano Incompressible heat-conducting relativistic fluid. **81k:76095**
Ishizuka, Toshihisa Propagation of a shock wave in general relativity. Stationary approximation. **81d:76131**
Königl, Arieh Relativistic gasdynamics in two dimensions. **81d:76132**
Kosevič, Ju. A. *See* **Andreev, A. F., 81h:76073**
Lerche, I. (*with* Wiita, P. J.) Soliton solutions and their stability for the flow of

relativistic fluids through channels. **81b:76077**

Mercheş, I. (*with* Agop, M.) Remarks on the relativistic invariantive magnetofluid dynamics. (Romanian summary) **81j:76113**

Prasad, Gunraj (*with* Sinha, B. B.) Relativistic magnetofluids and spacelike conformal mapping. **81e:76094**

Sharma, Rishi Ram (*with* Singh, H. N.) The growth and decay of weak discontinuities in relativistic fluids with vibrational relaxation. **81c:76058**

(*with* Singh, H. N.; Gaur, Madhukar) The growth and decay of weak waves in relativistic flows of dissociating gases. **81g:76128**

(*with* Singh, H. N.; Gaur, Madhukar) On the growth and decay of discontinuities in relativistic magnetogasdynamics. **81e:76095**

Singh, H. N. *See* **Sharma, Rishi Ram, 81c:76058**; **Sharma, Rishi Ram; et al., 81e:76095** *and* **Sharma, Rishi Ram; et al., 81g:76128**

Sinha, B. B. *See* **Prasad, Gunraj. 81e:76094**

Wilta, P. J. *See* **Lerche, I., 81b:76077**

Wilson, James R. A numerical method for relativistic hydrodynamics. (*See* **81j:83017**)

secondary classifications:

Anile, A. M. (*with* Greco, Antonio) Asymptotic waves and critical time in general relativistic magnetohydrodynamics. (French summary) **81m:83035**

Ballyu, M. Variational principle for perfect and imperfect fluids in general relativity. **(81k:83026)**

van Beelen, H. *See* **Hartoog, A., (81m:81085a)** *and* **Hartoog, A.; et al., (81m:81085b)**

Date, T. H. *See* **Patil, N. P., (81e:76083)**

Disatnik, Y. *See* **Hartoog, A.; et al., (81m:81085b)**

Docenko, V. S., *See* **Volovik, G. E., (81i:82048)**

Greco, Antonio *See* **Anile, A. M., (81m:83035)**

Hartoog, A. (*with* van Beelen, H.) Acoustics in superfluid helium. I. Introduction to the fourth-sound phenomenon. **(81m:81085a)**

(*with* van Beelen, H.; Disatnik, Y.) Acoustics in superfluid helium. II. Calculation of the attenuation of fourth sound. **(81m:81085b)**

Ho, Tin Lun (*with* Mermin, N. D.) Equilibrium order parameters and chemical potentials in rotating superfluids. **(81d:81131)**

Kupsch, J. (*with* Rühl, W.) On the quantization of hydrodynamics. **(81b:81035)**

Lominadze, D. G. (*with* Mihailovskiĭ, A. B.; Sagdeev, R. Z.) Langmuir turbulence of a relativistic plasma in a strong magnetic field. **(81b:82009)**

Maugin, Gérard A. Nonlinear wave propagation in relativistic continuum mechanics. **(81e:73085)**

Mercheş, I. A constrained minimum energy problem in relativistic magnetofluid dynamics. (French summary) **(81j:83005)**

Mermin, N. D. *See* **Ho, Tin Lun, (81d:81131)**

Mihailovskiĭ, A. B. *See* **Lominadze, D. G.; et al., (81b:82009)**

Patil, N. P. (*with* Date, T. H.) Lie invariance of the stress-energy tensor for the perfect magnetofluid. (Italian summary) **(81e:76083)**

Prasad, Gunraj On relativistic electromagnetic fluid flows. **(81g:83040)**

Rühl, W. *See* **Kupsch, J., (81b:81035)**

Sagdeev, R. Z. *See* **Lominadze, D. G.; et al., (81b:82009)**

Volovik, G. E. (*with* Docenko, V. S.,) Hydrodynamics of defects in condensed media, using as examples vortices in rotating He II and disclinations in a planar magnet. **(81i:82048)**

76Zxx Biological fluid mechanics

76Z05 Physiological flows

Barthès-Biesel, D. Motion of a spherical microcapsule freely suspended in a linear shear flow. **81k:76096**

Bestman, A. R. Long wavelength peristaltic pumping in a heated tube at low Reynolds numbers. (*See* **81m:73010**)

Duck, P. W. Pulsatile flow through constricted or dilated channels. **81g:76129**

Gupta, S. P. *See* **Shukla, J. B.; et al., 81a:76053**

Mueller, Thomas J. Application of numerical methods to physiological flows. (*See* **80e:76002**)

Parihar, R. S. *See* **Shukla, J. B.; et al., 81a:76053**

Poliščuk, G. I. Fluid flow induced by wave motion of the walls of a channel. **81j:76114**

Rao, B. R. P. *See* **Shukla, J. B.; et al., 81a:76053**

Shukla, J. B. (*with* Parihar, R. S.; Rao, B. R. P.; Gupta, S. P.) Effects of peripheral-layer viscosity on peristaltic transport of a bio-fluid. **81a:76053**

secondary classifications:

Bauer, H. F. (*with* Metten, St.; Siekmann, J.) Dynamic behavior of distensible fluid lines carrying a pulsating incompressible liquid. (German and Russian summaries) **(81j:73055)**

(Belocerkovskiĭ, O. M.) *See* **Direct numerical simulation of gas flows, (81g:76084)**

Caflisch, Russel E. (*with* Majda, George; Peskin, Charles S.; Strumolo, Gary) Distortion of the arterial pulse. **(81i:92005)**

Chandrasekhara, B. C. (*with* Rudraiah, N.) MHD flow through a channel of varying gap. **(81i:76035)**

Ehrlich, Louis W. The numerical solution of a Navier-Stokes problem in a stenosed tube: a danger in boundary approximations of implicit marching schemes. **(81d:76028)**

Guillez, Arthur Étude analytique et conséquences physiologiques d'un modèle de la respiration. (English summary) **(81a:92004)**

Hayashi, Yoshio Fluid-dynamical study of protoplasmic streaming in a plant cell. **(81f:92012)**

Theoretical study of motive force of protoplasmic streaming in a plant cell. **(81f:92013)**

Lai, W. Michael *See* **Mow, Van C., (81g:92009)**

Majda, George *See* **Caflisch, Russel E.; et al., (81i:92005)**

Matunobu, Yaso'o *See* **Takemitsu, Nobumasa, (81b:76022)**

McQueen, David M. *See* **Peskin, Charles S., (81g:92011)**

Metten, St. *See* **Bauer, H. F.; et al., (81j:73055)**

Mow, Van C. (*with* Lai, W. Michael) Recent developments in synovial joint biomechanics. **(81g:92009)**

Perram, J. W. Solutions of the ion transport equations with applications to the resting state of active cell membranes. **(81f:92016)**

Peskin, Charles S. Fluid dynamics of the heart and the ear. **(81i:92007)**

(*with* McQueen, David M.) Modeling prosthetic heart valves for numerical analysis of blood flow in the heart. **(81g:92011)**

See also **Caflisch, Russel E.; et al., (81i:92005)**

Rudraiah, N. *See* **Chandrasekhara, B. C., (81i:76035)**

Siekmann, J. *See* **Bauer, H. F.; et al., (81j:73055)**

Steele, Charles R. Studies of the ear. **(81k:92004)**

Strumolo, Gary *See* **Caflisch, Russel E.; et al., (81i:92005)**

Takemitsu, Nobumasa (*with* Matunobu, Yaso'o) Unsteady stagnation-point flow impinging obliquely on an oscillating flat plate. **(81b:76022)**

Direct numerical simulation of gas flows ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **(81g:76084)**

Gas dynamics ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **(81g:76084)**

Numerical simulation ★Прямое численное моделирование течений газа. (Russian) [Direct numerical simulation of gas flows] **(81g:76084)**

76Z10 Biopropulsion in water and in air

Higdon, J. J. L. The generation of feeding currents by flagellar motions. **81g:76130**

The hydrodynamics of flagellar propulsion: helical waves. **81g:76131**

76Z99 None of the above, but in this section

secondary classifications:

de Boer, E. Auditory physics. Physical principles in hearing theory. I. **(81d:92024)**

78–XX OPTICS, ELECTROMAGNETIC THEORY {For quantum optics, see 81K05.}

78–01 Elementary exposition, textbooks

(Bragg, Lawrence) *See* **Feynman, Richard R.; et al., 81a:78001c**

(Efremov, A. V.) *See* **Feynman, Richard R.; et al., 81a:78001b** *and* **81a:78001c**

Feynman, Richard R. (*with* Leighton, Robert B.; Sands, Matthew) ★Фейнмановские лекции по физике. 5. Электричество и магнетизм. (Russian) [Feynman lectures in physics. 5. Electricity and magnetism] **81a:78001a**

(*with* Leighton, Robert B.) ★Фейнмановские лекции по физике. 6. Электродинамика. (Russian) [Feynman lectures in physics. 6. Electrodynamics] **81a:78001b**

(*with* Leighton, Robert B.; Sands, Matthew) ★Feĭnmanovskie lekcii po fizike. 7. Fizika sploshnykh sred. (Russian) [Feynman lectures in physics. 7. Continuum physics] **81a:78001c**

Heald, Mark A. *See* **Marion, Jerry B., 81e:78001**

(Kopylov, G. I.) *See* **Feynman, Richard R.; et al., 81a:78001a** *and* **Feynman, Richard R.; et al., 81a:78001b**

Leighton, Robert B. *See* **Feynman, Richard R.; et al., 81a:78001a**; **Feynman, Richard R., 81a:78001b** *and* **Feynman, Richard R.; et al., 81a:78001c**

Marion, Jerry B. (*with* Heald, Mark A.) ★Classical electromagnetic radiation. **81e:78001**

(Nye, J. F.) *See* **Feynman, Richard R.; et al., 81a:78001c**

Poularikas, Alexander D. *See* **Seely, Samuel, 81a:78002**

Sands, Matthew *See* **Feynman, Richard R.; et al., 81a:78001a** *and* **Feynman, Richard R.; et al., 81a:78001c**

Seely, Samuel (*with* Poularikas, Alexander D.) ★Electromagnetics. **81a:78002**

(Simonov, Ju. A.) *See* **Feynman, Richard R.; et al., 81a:78001a**; **Feynman, Richard R.; et al., 81a:78001b** *and* **Feynman, Richard R.; et al., 81a:78001c**

(Smorodinskiĭ, Ja. A.) *See* **Feynman, Richard R.; et al., 81a:78001a**; **Feynman, Richard R.; et al., 81a:78001b** *and* **Feynman, Richard R.; et al., 81a:78001c**

78–02 Advanced exposition (research surveys, monographs, etc.)

Jones, Douglas Samuel ★Methods in electromagnetic wave propagation. **81k:78001**

Levaĭev, A. E. ★Движение и двойственность в релятивистской электродинамике. (Russian) [Motion and duality in relativistic electrodynamics] **81e:78002**

secondary classifications:

Graffi, Dario ★Nonlinear partial differential equations in physical problems. **(81k:35002)**

78–03 Historical (must also be assigned at least one classification number from Section 01)

Kukanova, E. E. *See* **Spasskiĭ, B. I., 81m:78001**

Spasskiĭ, B. I. (*with* Kukanova, E. E.) Did Newton and his followers have any conception of wave-particle dualism of light? (Russian. English summary) **81m:78001**

secondary classifications:

Buchwald, Jed Z. Optics and the theory of the punctiform ether. **(81m:01028)**

The Hall effect and Maxwellian electrodynamics in the 1880's. I. The discovery of a new electric field. **(81j:01018a)**

The Hall effect and Maxwellian electrodynamics in the 1880's. II. The unification of theory, 1881–1893. **(81j:01018b)**

(Hall, Edwin) *See* **Buchwald, Jed Z., (81j:01018a)**

(Huygens, Christiaan) *See* **Ziggelaar, Augustine, (81g:01008)**

Knudsen, Ole 19th century views on induction in moving conductors. **(81j:01020)**

(Maxwell, J. C.) *See* **Mayer, Daniel, (81f:01032)**

Mayer, Daniel One hundred years have passed since the death of J. C. Maxwell. (Czech. Russian and English summaries) **(81f:01032)**

(Newton, Isaac) *See* **Shapiro, Alan E., (81m:01018)**

Shapiro, Alan E. The evolving structure of Newton's theory of white light and color. **(81m:01018)**

Ziggelaar, Augustine How did the wave theory of light take shape in the mind of Christiaan Huygens? **(81g:01008)**

78–04 Explicit machine computation and programs (not the theory of computation or programming)

Constantinescu, Fl. (*with* Hănţilă, Florea) A numerical method for the calculation of the stationary magnetic field in nonlinear and inhomogeneous media. (German summary) **81g:78001**

Hănţilă, Florea *See* **Constantinescu, Fl., 81g:78001**

secondary classifications:

Mărieş, V. A. Numerical method for the determination of the magnetic induction produced by symmetry sources. (French and German summaries) **(81j:65135)**

78–05 Experimental papers

78–06 Proceedings, conferences, etc.

(Usienghi, Piergiorgio L. E.) *See* **Nonlinear electromagnetics, 81j:78001**

Electromagnetics ★Nonlinear electromagnetics. **81j:78001**

Nonlinear electromagnetics ★Nonlinear electromagnetics. **81j:78001**

78A02 Foundations

78A05 Geometric optics

Bertero, M. (*with* de Mol, C.; Viano, G. A.) On the regularization of linear inverse problems in Fourier optics. **81k:78002**

Boltjanskiĭ, V. G. (*with* Nikolaev, L. K.) A computer experiment in calculation of light trajectories. (Russian) **81h:78001**

Drummond, P. D. (*with* McNeil, K. J.; Walls, D. F.) Nonequilibrium transitions in sub/second harmonic generation. I. Semiclassical theory. **81e:78003**

Duret, Gilles (*with* Zepp, Gérard; Wick, Alain) Résonateur ouvert en géométrie sphérique. (English summary) **81g:78002**

Gutman, A. L. Diffusion of field in a nonhomogeneous material. **81g:78003**

Herzberger, Max ★Modern geometrical optics. **81b:78001**

Kaufman, Allan N. *See* **McDonald, Steven W., 81h:78002**

Kirillov, V. V. Riemannian geometry in the problem of determining the amplitude of a wave field by the method of geometric optics. (Russian) **81e:78004**

Klingsporn, Paul E. Minimum and absolute minimum spherical aberration of a simple, thin lens. **81i:78001**

McDonald, Steven W. (*with* Kaufman, Allan N.) Ray and wave optics of integrable and stochastic systems. **81h:78002**

McNeil, K. J. *See* **Drummond, P. D.; et al., 81e:78003**

de Mol, C. *See* **Bertero, M.; et al., 81k:78002**

Nikolaev, L. K. *See* **Boltjanskiĭ, V. G., 81h:78001**

Nye, J. F. Optical caustics and diffraction catastrophes. **81a:78003**

Šahurdin, V. I. *See* **Zimin, V. D., 81g:78004**

Švarcburg, A. B. The nonlinear geometric optics of the localized wave fields. **81j:78002**

Turner, E. F. (*with* Williams, H. T.) Geometrical optics of planar interfaces. **81f:78001**

Viano, G. A. *See* **Bertero, M.; et al., 81k:78002**

Walls, D. F. *See* **Drummond, P. D.; et al., 81e:78003**

Wick, Alain *See* **Duret, Gilles; et al., 81g:78002**

Williams, H. T. *See* **Turner, E. F., 81f:78001**

Zepp, Gérard *See* **Duret, Gilles; et al., 81g:78002**

Zimin, V. D. (*with* Šahurdin, V. I.) Method of calculating stresses by the results through translucence of three-dimensional birefractive models. (Russian) **81g:78004**

secondary classifications:

Ambarcumjan, A. S. *See* **Avakjan, A. L.; et al., (81h:78013)**

Avakjan, A. L. (*with* Ambarcumjan, A. S.; Jan Ši) X-ray transition radiation formed in a plate with fuzzy boundaries. (Russian. Armenian and English summaries) **(81h:78013)**

Babkin, G. I. (*with* Kljackin, V. I.) On the statistical theory of first-order partial differential equations. (Russian) **(81j:35029)**

Bernstein, Ira B. *See* **Friedland, Lewis, (81d:76116)** *and* **Friedland, Lewis, (81j:76104)**

Brickell, F. (*with* Westcott, B. S.) The ray geometry of offset dual reflector antenna systems. **(81g:78035)**

Colestock, P. L. (*with* Kulp, J. L.) Geometric optics of lower hybrid waves in nonuniform plasmas. **(81d:76102)**

Cvetkova, I. L. *See* **Karamzin, Ju. N., (81c:65049)**

van Doorn, A. J. *See* **Koenderink, J. J., (81g:92028)**

Friedland, Lewis (*with* Bernstein, Ira B.) General geometric optics formalism in plasmas. **(81d:76116)**

(*with* Bernstein, Ira B.) Geometric optics in plasmas characterized by non-Hermitian dielectric tensors. **(81j:76104)**

Güttinger, W. Catastrophe geometry in physics: a perspective. **(81i:58017)**

Jan Ši *See* **Avakjan, A. L.; et al., (81h:78013)**

Karamzin, Ju. N. (*with* Cvetkova, I. L.) Spectral method for solving nonlinear quasioptical problems. (Russian. English summary) **(81c:65049)**

Kljackin, V. I. *See* **Babkin, G. I., (81j:35029)**

Koenderink, J. J. (*with* van Doorn, A. J.) Photometric invariants related to solid shape. **(81g:92028)**

Kulp, J. L. *See* **Colestock, P. L., (81d:76102)**

Lee, Shung Wu Uniform asymptotic theory of electromagnetic edge diffraction: a review. **(81j:78017)**

Westcott, B. S. *See* **Brickell, F., (81g:78035)**

78A10 Physical optics

Baltes, H. P. (*with* Ferwerda, H. A.) Partially coherent sources with phase profile and the Van Cittert-Zernike theorem. **81e:78005**

Barakat, Richard Moment estimator approach to the retrieval problem in coherence theory. **81d:78001**

Barrett, Harrison H. *See* **Chiu, Ming Yee; et al., 81e:78006**

Carmichael, H. J. (*with* Hermann, J. A.) Analytic description of optical bistability including spatial effects. **81d:78002**

Chiu, Ming Yee (*with* Barrett, Harrison H.; Simpson, Robert G.) Three-dimensional reconstruction from planar projections. **81e:78006**

Ferwerda, H. A. *See* **Baltes, H. P., 81e:78005**

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Rossi, U. *See* **di Vita, P., 81g:78008**

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Adam, J. C. (*with* Gourdin Serveniere, A.; Nédélec, J.-C.; Raviart, P.-A.) Study of an implicit scheme for integrating Maxwell's equations. **81e:78008**
Albano, A. M. (*with* Bedeaux, D.; Vlieger, J.) On the description of interfacial electromagnetic properties using singular fields, charge density and currents at a dividing surface. **81f:78003**
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Negro, Angelo Errata corrige: "Successive approximations method for magnetic field steady state nonlinear equations" [Rend. Sem. Mat. Univ. Politec. Torino **35** (1976/77), 361–372 (1978); MR 58 #8829]. **81d:78011**
A time-periodic boundary value problem for nonlinear quasistationary Maxwell equations. (Italian summary) **81i:78003**
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Papanicolaou, George C. Electromagnetic problems in composite materials in linear and nonlinear regimes. **81m:78009**
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Kreß, Rainer *See* **Knauff, W., (81a:35015)**

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Maugin, Gérard A. Further comments on the equivalence of Abraham's, Minkowski's, and others' electrodynamics. (French summary) **(81h:83025)**

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Mehra, Mohan Lal ★Zur asymptotischen Verteilung der Eigenwerte des Maxwellschen Randwertproblems. (German) [On the asymptotic distribution of eigenvalues of Maxwell's boundary value problem] **(81c:35099)**

Milonni, Peter W. Classical and quantum theories of radiation. (*See* **81i:81002**)

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Sattinger, David H. ★Group-theoretic methods in bifurcation theory. **(81e:58022)**

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Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics ★Численно-аналитические методы решения задач теплопроводности и электродинамики. (Russian) [Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics] **(81c:80004)**

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Studies in elasticity and plasticity ★Исследования по упругости и пластичности. Вып. 13. (Russian) [Studies in elasticity and plasticity. No. 13] **(81k:73002)**

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(Vesecky, John F.) *See* **Bass, F. G.; et al., 81j:78016**

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Wilson, S. J. (*with* Sen, K. K.) Light scattering by an optically thin inhomogeneous, spherically-symmetric planetary atmosphere: brightness at the zenith near the terminator. **81h:78024**

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Diffraction and propagation of waves ★Проблемы дифракции и распространения волн. Вып. 17. (Russian) [Problems in the diffraction and propagation of waves. No. 17] **81c:78006**

Problems in the diffraction and propagation of waves ★Проблемы дифракции и распространения волн. Вып. 17. (Russian) [Problems in the diffraction and propagation of waves. No. 17] **81c:78006**

secondary classifications:

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Aleksandrova, A. A. (*with* Hižnjak, N. A.) Integral equations of magnetohydrodynamics. **(81b:76068)**

Asghar, S. (*with* Rashid, M. A.) Diffraction of planetary waves by two parallel semi-infinite plates. **(81a:76008)**

Asvestas, John S. The physical optics method in electromagnetic scattering. **(81k:78006)**

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Berry, M. V. Some geometric aspects of wave motion: wavefront dislocations, diffraction catastrophes, diffractals. **(81f:58012)**

Chang, Shu Kong (*with* Mei, Kenneth K.) Generalized Sommerfeld integrals and field expansions in two-medium half-spaces. **(81e:78011)**

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Glasko, V. B. (*with* Hudak, Ju. I.) Additive representation of characteristics of layered media and questions of uniqueness of the solutions of inverse problems. (Russian) **(81k:73046)**

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McIsaac, Paul R. A general reciprocity theorem. **(81k:78003)**

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Meister, E. (*with* Speck, F.-O.) Some multidimensional Wiener-Hopf equations with applications. **(81c:45004)**

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Nye, J. F. Optical caustics and diffraction catastrophes. **(81a:78003)**

Petrašen', P. V. (*with* Čuhovskiĭ, F. N.; Šulpina, I. L.) The physical foundations of the computer simulation of X-ray traverse topographs. **(81m:92011)**

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Brickell, F. (*with* Westcott, B. S.) The ray geometry of offset dual reflector antenna systems. **81g:78035**

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Molotkov, I. A. (*with* Starkov, A. S.) Letter to the editors: "Local degeneration of waves in a thin waveguide" [Zap. Naučn. Sem. Leningrad. Otdel. Mat. Inst. Steklov. (LOMI) 78 (1978), 138–148; MR 80g:78018]. (Russian) **81f:78019**

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Cavanagh, E. (*with* Cook, B. D.) Gaussian-Laguerre description of ultrasonic fields—numerical example: circular piston. **(81a:76038)**

Chen, Chun Hsiung (*with* Lien, Ts'un Tê) The variational principle for nonselfadjoint electromagnetic problems. **(81j:78023)**

Cook, B. D. *See* **Cavanagh, E., (81a:76038)**

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Mokin, Ju. I. Specific properties of algorithms used in the determination of the trajectories of relativistic electrons in a self-consistent electromagnetic field. (Russian) **(81a:78010)**

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Savenkova, N. P. A nonlinear eigenvalue problem. (Russian) **(81k:35127)**

Tjutekin, V. V. (*with* Ukolov, A. T.; Fedorjuk, M. V.) Active quenching of electromagnetic waves. **(81g:78020)**

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78A55 Technical applications

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Doležel, Ivo Calculation of the leakage field in the window of a transformer and determination of short-circuit forces acting on individual windings. **81i:78009**

Fil'c, R. ★Математические основы теории электромеханических преобразователей. (Russian) [Mathematical foundations of the theory of electromechanical transformers] **81e:78041**

Filicori, Fabio (*with* Monaco, Vito Antonio; Naldi, Carlo) Simulation and design of microwave class-*C* amplifiers through harmonic analysis. **81g:78039**

Forsyth, P., Jr. (*with* Rasmussen, H.) A Kantorovich method of solution of time-dependent electrochemical machining problems. **81j:78020**

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Maiorov, S. A. (*with* Rudenko, A. A.; Šipilin, A. V.) A numerical method for solving systems of equations for the potential and charge carrier in semiconductors. (Russian) **81j:78021**

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Malaviya, Shashi D. (*with* Singh, Vijendra Pal) Transmission lines loaded at regular intervals. **81c:78012**

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Naldi, Carlo *See* **Filicori, Fabio; et al., 81g:78039**

Oparin, G. A. A complex of programs for a parametric synthesis of precision electromechanical systems. (Russian) **81m:78029**

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Panov, V. I. (*with* Rudenko, V. N.) Self-pumped parametric sensor of small forces. **81e:78042**

Parrott, J. E. A problem in the calculation of diffusion capacitance. **81d:78032**

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secondary classifications:

Abramovič, S. M. *See* **Leonov, G. A.; et al., (81i:34042)**

Bandes, K. *See* **Miranker, Willard L., (81i:65105)**

Burkina, L. I. *See* **Leonov, G. A.; et al., (81i:34042)**

(Chari, M. V. K.) *See* **Finite elements in electrical and magnetic field problems, (81j:78009)**

Clark, T. D. *See* **Widom, Allan, (81h:81206)**

Edgcombe, C. J. The dispersion equation for the gyrotron amplifier. **(81j:78019)**

Förste, Joachim Über die Strömung in einem elektrogasdynamischen Generator. **(81g:76109)**

Hermann, J. A. Steady-state pulses in degenerate swept-gain amplifiers. **(81m:81088)**

Izmailov, I. A. (*with* Kočelap, V. A.) Theory of the recombination laser on electronic phototransitions, excited by external light. (Russian) **(81j:81075)**

Kočelap, V. A. *See* **Izmailov, I. A., (81j:81075)**

Korjakin, Ju. A. *See* **Leonov, G. A.; et al., (81i:34042)**

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Leonov, G. A. (*with* Abramovič, S. M.; Burkina, L. I.; Kozjaruk, A. E.; Korjakin, Ju. A.; Raĭtman, F.) A method of reduction in the theory of dynamical systems with a cylindrical phase space and its application to the investigation of the stability of power systems. (Russian) **(81i:34042)**

Minelli, T. A. (*with* Pusterla, M.; Roberty, N. C.) Analytical approximate solutions of the nonlinear basic equations in classical physics. **(81h:34011)**

Miranker, Willard L. (*with* Bandes, K.) A functional relation and an acceleration procedure for calculating the voltage response of Josephson junctions. **(81i:65105)**

Negro, Angelo A time-periodic boundary value problem for nonlinear quasistationary Maxwell equations. (Italian summary) **(81i:78003)**

Noor Mohammad, S. A test of convergence of the expansion of the screening charge density for impurity ions in semiconductors. (German summary) **(81h:82042)**

Pospíšil, Jaroslav Study of mechanical and electrical oscillations of two coupled harmonical oscillators. (Czech. Russian and English summaries) **(81f:70017)**

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Raĭtman, F. *See* **Leonov, G. A.; et al., (81i:34042)**

Roberty, N. C. *See* **Minelli, T. A.; et al., (81h:34011)**

Rosser, J. Barkley An iterative algorithm for calculating potentials near two parallel plates of equal width. II. **(81f:78007)**

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(Silvester, P. P.) *See* **Finite elements in electrical and magnetic field problems, (81j:78009)**

di Vita, P. (*with* Rossi, U.) A modal approach to propagation in graded optical fibres. (French summary) **(81g:78008)**

Widom, Allan (*with* Clark, T. D.) Quantum electrodynamic circuit interpretation of the thermal Nyquist noise theorem in the $\omega \gtrsim (k_B T/\hbar)$ limit. **(81h:81206)**

Žilič, A. G. (*with* Korytin, O. V.) Electromagnetic waves in an anisotropic semiconductor in the vicinity of the interband-transitions frequency. (Russian. English summary) **(81m:78011)**

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78A60 Lasers, masers, optical bistability [See also 81K05.]

78A70 Biological applications [See also 92A09, 92A27.]

78A97 Mathematically heuristic optics and electromagnetic theory (must also be assigned at least one other classification number in this section)

78A99 Miscellaneous topics

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Barnes, Frank S. (*with* Hu, Chia Lun J.) Nonlinear interactions of electromagnetic waves with biological materials. (*See* **81j:78001**)

Bleier, Ja. F. (*with* Grinhof, M. F.; Rodè, È. È.; Spalvin′, A. P.; Janbickiĭ, R. A.) Parallel computing methods and means for solving boundary value problems of field theory. (Russian) **81g:78042**

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Grinhof, M. F. *See* **Bleier, Ja. F.; et al., 81g:78042**

Hu, Chia Lun J. *See* **Barnes, Frank S.,** (*See* **81j:78001**)

Janbickiĭ, R. A. *See* **Bleier, Ja. F.; et al., 81g:78042**

Lien, Ts'un Tê *See* **Chen, Chun Hsiung, 81j:78023**

Rodè, È. È. *See* **Bleier, Ja. F.; et al., 81g:78042**

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80–01 Elementary exposition, textbooks

80–02 Advanced exposition (research surveys, monographs, etc.)

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80–05 Experimental papers

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(Kokovin, G. A.) *See* **Mathematical problems of chemical thermodynamics, 81j:80001**

(Mihailov, V. A.) *See* **Mathematical problems of chemical thermodynamics, 81j:80001**

(Ray, W. Harmon) *See* **Reactive systems, 81i:80001**

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Dynamics and Modelling of Reactive Systems ★Dynamics and modelling of reactive systems. **81i:80001**

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Manselli, Paolo (*with* Miller, Keith) Calculation of the surface temperature and heat flux on one side of a wall from measurements on the opposite side. (Italian summary) **81m:80004**

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Wilkins, J. Ernest, Jr. Minimum mass thin fins for space radiators. (*See* **81e:00004**)

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Electrodynamics ★Численно-аналитические методы решения задач теплопроводности и электродинамики. (Russian) [Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics] **81c:80004**

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Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics ★Численно-аналитические методы решения задач теплопроводности и электродинамики. (Russian) [Numerical-analytic methods for the solution of problems of heat conduction and electrodynamics] **81c:80004**

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Erneux, T. *See* **Herschkowitz-Kaufman, M., (81c:92018)**

Finat'ev, Ju. P. (*with* Cel'sov, Ju. G.) Computer calculation of parameters of a dispersive medium by the Bremermann method. (Russian) **(81d:92025)**

Gallucci, Vincent F. *See* **Hertzberg, Richard C., (81k:60076)**

Ganapathisubramanian, N. (*with* Ramaswamy, R.; Kuriacose, J. C.) Limit cycle behaviour in the Belousov-Zhabotinskii oscillatory reaction. **(81h:92031)**

Gardner, Robert A. Asymptotic behavior of semilinear reaction-diffusion systems with Dirichlet boundary conditions. **(81f:35065)**

Gibbs, R. G. Traveling waves in the Belousov-Zhabotinskiĭ reaction. **(81g:35051)**

Harrison, Gary W. A stream pollution model with intervals for the rate coefficients. **(81f:92011)**

Hase, William L. *See* **Wolf, Ralph J., (81j:81072)**

Herschkowitz-Kaufman, M. (*with* Erneux, T.) The bifurcation diagram of model chemical reactions. **(81c:92018)**

Hertzberg, Richard C. (*with* Gallucci, Vincent F.) First-order stochastic chemical reactions and oscillations in the variance. **(81k:60076)**

Holland, Charles J. *See* **Berryman, James G., (81m:35065)**

Hunding, Axel (*with* Billing, Gert Due) Secondary bifurcations in spherical reaction-diffusion systems. **(81e:92007)**

Ivanov, C. I. Quantum statistics of reaction-diffusion systems. **(81f:82012)**

Kapila, A. K. (*with* Matkowsky, Bernard J.) Reactive-diffusive system with Arrhenius kinetics: the Robin problem. **(81m:80003)**

Kidachi, Hideyuki On mode interactions in reaction diffusion-equation with nearly degenerate bifurcations. **(81i:35082)**

Kireev, V. I. (*with* Pirumov, U. G.) The calculation of steady-state supersonic flows with nonequilibrium chemical reactions. (Russian) **(81b:76040)**

Kubíček, Milan *See* **Schreiber, Igor; et al., (81m:34050)**

Kuriacose, J. C. *See* **Ganapathisubramanian, N.; et al., (81h:92031)**

Łada, A. *See* **Czajkowski, G., (81k:82003)**

Lange, Charles G. (*with* Larson, D. A.) Transient solutions to some weakly diffusive nonlinear diffusion equations. **(81k:35080)**

Larson, D. A. *See* **Lange, Charles G., (81k:35080)**

Lee, Sun Bok (*with* Ryu, Dewey D. Y.) External diffusion effects on the kinetic constants of immobilized enzyme systems. **(81d:92006)**

Marek, Miloš *See* **Schreiber, Igor; et al., (81m:34050)**

Matkowsky, Bernard J. *See* **Kapila, A. K., (81m:80003)**

Milstein, Jaime Error estimates for rate constants of inverse problems. **(81m:92026)**

Mon, Eduardo *See* **Amundson, Neal R., (81m:80009)**

Neu, John C. Large populations of coupled chemical oscillators. **(81b:45020)**

See also **Cohen, Donald S., (81e:34027)**

Nunziato, Jace W. (*with* Walsh, Edward K.) On ideal multiphase mixtures with chemical reactions and diffusion. **(81e:73005)**

Oi, K. (*with* Sayama, H.; Takamatsu, T.) Multimodality analysis of a class of multistage allocation problems. **(81f:90095)**

(Pacault, Adolphe) *See* **Synergetics: Far from equilibrium, (81a:82002)**

Pao, C. V. Mathematical analysis of enzyme-substrate reaction diffusion in some biochemical systems. **(81i:92006)**

Peregudov, A. N. The second boundary value problem for a class of quasilinear parabolic systems of differential equations. (Russian) **(81e:35068)**

Pirumov, U. G. *See* **Kireev, V. I., (81b:76040)**

Rahman, M. Perturbation solutions arising in heat and mass transfer within a stream in a chemical flow reactor. **(81h:80007)**

Ramaswamy, R. *See* **Ganapathisubramanian, N.; et al., (81h:92031)**

(Ray, W. Harmon) *See* **Reactive systems, (81i:80001)**

Ryu, Dewey D. Y. *See* **Lee, Sun Bok, (81d:92006)**

Sattinger, David H. Selection mechanisms in symmetry breaking phenomena. **(81c:58030)**

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Schnakenberg, J. Simple chemical reaction systems with limit cycle behaviour. **(81f:35013)**

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(Stewart, Warren E.) *See* **Reactive systems, (81i:80001)**

Takamatsu, T. *See* **Oi, K.; et al., (81f:90095)**

Theodosopulu, M. *See* **Arnold, L., (81f:35061)**

Troy, William C. The existence of traveling wave front solutions of a model of the Belousov-Zhabotinskii chemical reaction. **(81f:35053)**

Vasil'ev, V. B. *See* **Vavilin, V. A., (81d:92003)**

Vavilin, V. A. (*with* Vasil'ev, V. B.) ★Математическое моделирование процессов биологической очистки сточных вод активным илом. (Russian) [Mathematical modeling of processes of biological treatment of sewage by activated sludge] **(81d:92003)**

(Vidal, Christian) *See* **Synergetics: Far from equilibrium, (81a:82002)**

Walsh, Edward K. *See* **Nunziato, Jace W., (81e:73005)**

Wayland, J. R. *See* **Brannen, J. P., (81k:92011)**

Wolf, Ralph J. (*with* Hase, William L.) Quasiperiodic trajectories for a multidimensional anharmonic classical Hamiltonian excited above the unimolecular threshold. **(81j:81072)**

Wood, Reg M. W. *See* **Bardsley, William G.; et al., (81h:92030)**

Woolfson, Richard *See* **Bardsley, William G.; et al., (81h:92030)**

Bordeaux ★Synergetics. Far from equilibrium. **(81a:82002)**

Conference:
Far from Equilibrium: Instabilities and Structures ★Synergetics. Far from equilibrium. **(81a:82002)**
Dynamics and modelling of reactive systems ★Dynamics and modelling of reactive systems. **(81i:80001)**
Madison, Wis. ★Dynamics and modelling of reactive systems. **(81i:80001)**
Reactive systems ★Dynamics and modelling of reactive systems. **(81i:80001)**
Seminar:
Dynamics and Modelling of Reactive Systems ★Dynamics and modelling of reactive systems. **(81i:80001)**
Synergetics: Far from equilibrium ★Synergetics. Far from equilibrium. **(81a:82002)**

80A32 Chemically reacting flows [See also 92A09, 92A40.]

80A35 Mathematically heuristic classical thermodynamics (must also be assigned at least one other classification number in this section)

Clarietta, Michele The entropy principle and thermodynamic restrictions for fluids with memory. (Italian. English summary) **81c:80020**

secondary classifications:

Komkov, Vadim *See* **Valanis, K. C., (81i:82030)**
Valanis, K. C. (*with* Komkov, Vadim) Irreversible thermodynamics from the point of view of internal variable theory (a Lagrangian formulation). (Polish and Russian summaries) **(81i:82030)**

80A99 Miscellaneous topics

Halmo, Deborah Tepper Homogeneous generalized temperatures. **81h:80013**

secondary classifications:

Clement, C. F. (*with* Wood, M. H.) Equations for the growth of a distribution of small physical objects. **(81j:92059)**
Coleman, Bernard D. (*with* Owen, David R.) On the thermodynamics of elastic-plastic materials with temperature-dependent moduli and yield stresses. **(81i:73002)**
Mănzatu, Eufrosina Study of a thermodynamic system by seminormed topologies. (*See* **81j:93006a**)
Ortoleva, Peter Discussion paper: bifurcations and perturbed attractors in physicochemical systems. **(81c:92019)**
Owen, David R. *See* **Coleman, Bernard D., (81i:73002)**
Wood, M. H. *See* **Clement, C. F., (81j:92059)**

81–XX QUANTUM MECHANICS

81–01 Elementary exposition, textbooks

Feynman, Richard R. (*with* Leighton, Robert B.; Sands, Matthew) ★Фейнмановские лекции по физике. 8, 9. Квантовая механика. (Russian) [Feynman lectures in physics. 8, 9. Quantum mechanics] **81a:81001**
Frodesen, A. G. (*with* Skjeggestad, O.; Tøfte, H.) ★Probability and statistics in particle physics. **81e:81001**
Grübl, G. J. (*with* Leubner, C.) Current misconception concerning the time evolution operator. **81j:81001**
(Kopylov, G. I.) *See* **Feynman, Richard R.; et al., 81a:81001**
(Kulish, P. P.) *See* **Messiah, Albert, 81g:81001**
Leighton, Robert B. *See* **Feynman, Richard R.; et al., 81a:81001**
Leubner, C. *See* **Grübl, G. J., 81j:81001**
Messiah, Albert ★Квантовая механика. Том 2. (Russian) [Quantum mechanics. Vol. 2] **81g:81001**
Mitter, Heinrich ★Quantentheorie. (German) [Quantum theory] **81k:81001**
Sands, Matthew *See* **Feynman, Richard R.; et al., 81a:81001**
Skjeggestad, O. *See* **Frodesen, A. G.; et al., 81e:81001**
(Smorodinskiĭ, Ja. A.) *See* **Feynman, Richard R.; et al., 81a:81001**
Stolz, Hubertus ★Supraleitung. (German) [Superconductivity] **81f:81001**
Tøfte, H. *See* **Frodesen, A. G.; et al., 81e:81001**

secondary classifications:

Dubrovin, B. A. (*with* Novikov, S. P.; Fomenko, A. T.) ★Современная геометрия. (Russian) [Modern geometry] **(81f:53001)**
Fomenko, A. T. *See* **Dubrovin, B. A.; et al., (81f:53001)**
Novikov, S. P. *See* **Dubrovin, B. A.; et al., (81f:53001)**

81–02 Advanced exposition (research surveys, monographs, etc.)

(Barut, Asim Orhan) *See* **Foundations of radiation theory and quantum electrodynamics, 81i:81002**
(Connolly, John W. D.) *See* **Slater, John Clarke, 81i:81001**
Peierls, Rudolf ★Surprises in theoretical physics. **81g:81002**
Slater, John Clarke ★The calculation of molecular orbitals. **81i:81001**
Foundations of radiation theory and quantum electrodynamics ★Foundations of radiation theory and quantum electrodynamics. **81i:81002**
Quantum electrodynamics ★Foundations of radiation theory and quantum electrodynamics. **81i:81002**
Radiation theory ★Foundations of radiation theory and quantum electrodynamics. **81i:81002**

secondary classifications:

Knight, P. L. (*with* Milonni, Peter W.) The Rabi frequency in optical spectra. **(81k:81121)**
Mackey, George W. Harmonic analysis as the exploitation of symmetry—a historical survey. **(81d:01017)**
Milonni, Peter W. *See* **Knight, P. L., (81k:81121)**

81–03 Historical (must also be assigned at least one classification number from Section 01)

Dürr, H.-P. Heisenberg's unified theory of elementary particles and the structure of time and space. **81m:81001**
(Einstein, Albert) *See* **Yang, Chen Ning, 81c:81001**
Glashow, Sheldon Lee Toward a unified theory: threads in a tapestry. **81k:81002**
(Gregory, Bernard) *See* **Weisskopf, Victor F., 81e:81002**
(Hooker, C. A.) *See* **Logico-algebraic approach to quantum mechanics, 81i:81003a**
(van Hove, Léon) *See* **Weisskopf, Victor F., 81e:81002**
(Jacob, M.) *See* **Weisskopf, Victor F., 81e:81002**
Weisskopf, Victor F. ★The 1979 Bernard Gregory lectures. **81e:81002**
Yang, Chen Ning Einstein's impact on theoretical physics. **81c:81001**
Gregory Lectures *See* **Weisskopf, Victor F., 81e:81002**
Logico-algebraic approach to quantum mechanics ★The logico-algebraic approach to quantum mechanics. Vol. I. **81i:81003a**
Obituary:
Gregory, Bernard *See* **Weisskopf, Victor F., 81e:81002**
Quantum mechanics ★The logico-algebraic approach to quantum mechanics. Vol. I. **81i:81003a**

secondary classifications:

Danin, D. S. The archives of an unforgettable time. (Russian) **(81m:01045)**
(Hermann, Armin) *See* **Pauli, Wolfgang, (81c:01034)**
Jammer, Max Albert Einstein und das Quantenproblem. **(81g:01016)**
Janouch, F. ★Lev D. Landau: his life and work. **(81f:01031)**
Klein, Martin J. Einstein and the development of quantum physics. (*See* **81k:01053**)
(Landau, Lev D.) *See* **Janouch, F., (81f:01031)**
(von Meyenn, Karl) *See* **Pauli, Wolfgang, (81c:01034)**
Pauli, Wolfgang ★Wissenschaftlicher Briefwechsel mit Bohr, Einstein, Heisenberg u.a. Band I: 1919–1929. (German) [Scientific correspondence with Bohr, Einstein, Heisenberg and others. Vol. I: 1919–1929] **(81c:01034)**
Schöpf, Hans-Georg Albert Einstein und die ersten Anfänge der Quantentheorie. **(81c:01028)**
(Weisskopf, Victor F.) *See* **Pauli, Wolfgang, (81c:01034)**
Bibliography:
Landau, Lev D. *See* **Janouch, F., (81f:01031)**
Biography:
Landau, Lev D. *See* **Janouch, F., (81f:01031)**
Correspondence:
Pauli, Wolfgang *See* **Pauli, Wolfgang, (81c:01034)**

81–04 Explicit machine computation and programs (not the theory of computation or programming)

secondary classifications:

Hajj, F. Y. Eigenvalues of any parameter in the Schrödinger radial equation. **(81m:81013)**
Kogut, John B. (*with* Pearson, R. P.; Shigemitsu, J.) The string tension, confinement and roughening in SU(3) Hamiltonian lattice gauge theory. **(81k:81078)**
Kuti, Julius (*with* Polónyi, J.; Szlachányi, K.) Monte Carlo study of SU(2) gauge theory at finite temperature. **(81k:81060)**
McLerran, Larry D. (*with* Svetitsky, Benjamin) A Monte Carlo study of SU(2) Yang-Mills theory at finite temperature. **(81k:81063)**
Pearson, R. P. *See* **Kogut, John B.; et al., (81k:81078)**
Petcher, D. (*with* Weingarten, Don) Monte Carlo calculations and a model of the phase structure for gauge theories on discrete subgroups of SU(2). **(81j:81052)**
Polónyi, J. *See* **Kuti, Julius; et al., (81k:81060)**
Shigemitsu, J. *See* **Kogut, John B.; et al., (81k:81078)**
Svetitsky, Benjamin *See* **McLerran, Larry D., (81k:81063)**
Szlachányi, K. *See* **Kuti, Julius; et al., (81k:81060)**
Weingarten, Don *See* **Petcher, D., (81j:81052)**

81–05 Experimental papers

81–06 Proceedings, conferences, etc.

(Alonso, J. L.) *See* **Quantum chromodynamics, 81i:81004**
(Basdevant, Jean-Louis) *See* **Hadron structure and lepton-hadron interactions, 81a:81002**
(Cabibbo, Nicola) *See* **Hadronic matter at extreme energy density, 81e:81006**
(Castell, L.) *See* **Quantum theory and the structures of time and space, 81j:81002a** *and* **Quantum theory and the structures of time and space, 81j:81002b**
(Dittrich, Walter) *See* **Recent developments in particle and field theory, 81a:81007**
(Donini, John C.) *See* **Recent advances in group theory and their application to spectroscopy, 81a:81006**
(Drieschner, M.) *See* **Quantum theory and the structures of time and space, 81j:81002a**
(Gamkrelidze, R. V.) *See* **Current problems in mathematics, 81e:81004**
(Gastmans, Raymond) *See* **Hadron structure and lepton-hadron interactions, 81a:81002**
(Harnad, John) *See* **Geometrical and topological methods in gauge theories, 81e:81005**
(Heisenberg, Werner) *See* **Quantum theory and the structures of time and space, 81j:81002a**

(Hinze, Jürgen) *See* **Permutation group in physics and chemistry, 81a:81004**
(Hooker, C. A.) *See* **Logico-algebraic approach to quantum mechanics, 81i:81003b**
(Iagolnitzer, Daniel) *See* **Complex analysis, microlocal calculus and relativistic quantum theory, 81e:81003**
(Kolmogorov, A. N.) *See* **Euclidean quantum field theory, 81f:81002**
(Krausz, Frank) *See* **High-energy physics in the Einstein centennial year, 81a:81003**
(Kurşunoğlu, Behram) *See* **High-energy physics in the Einstein centennial year, 81a:81003**
(Lévy, Maurice) *See* **Hadron structure and lepton-hadron interactions, 81a:81002**
(Minkos, R. A.) *See* **Euclidean quantum field theory, 81f:81002**
(Novikov, S. P.) *See* **Euclidean quantum field theory, 81f:81002**
(Osterwalder, Konrad) *See* **Mathematical problems in theoretical physics, 81f:81003**
(Perlmutter, Arnold) *See* **High-energy physics in the Einstein centennial year, 81a:81003**
(Scott, Linda F.) *See* **High-energy physics in the Einstein centennial year, 81a:81003**
(Sertorio, Luigi) *See* **Hadronic matter at extreme energy density, 81e:81006**
(Shnider, Steven) *See* **Geometrical and topological methods in gauge theories, 81e:81005**
(Speiser, David) *See* **Hadron structure and lepton-hadron interactions, 81a:81002**
(Tarrach, R.) *See* **Quantum chromodynamics, 81i:81004**
(Urban, Paul) *See* **Facts and prospects of gauge theories, 81b:81001**
(von Weizsäcker, C. F.) *See* **Quantum theory and the structures of time and space, 81j:81002a** *and* **Quantum theory and the structures of time and space, 81j:81002b**
(Weyers, Jacques) *See* **Hadron structure and lepton-hadron interactions, 81a:81002**
(Yukawa, Hideki) *See* **Theory of elementary particles extended in space-time, 81e:81007**
(Zinn-Justin, Jean) *See* **Hadron structure and lepton-hadron interactions, 81a:81002**
Acta Physica Austriaca Suppl. ★Facts and prospects of gauge theories. **81b:81001**
Antigonish, N.S. ★Recent advances in group theory and their application to spectroscopy. **81a:81006**
Bielefeld ★The permutation group in physics and chemistry. **81a:81004**
Calculus ★Complex analysis, microlocal calculus and relativistic quantum theory. **81e:81003**
Cambridge, Mass. ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part A. **81a:81005a**
★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. **81a:81005b**
Cargèse ★Hadron structure and lepton-hadron interactions. **81a:81002**
Chemistry ★The permutation group in physics and chemistry. **81a:81004**
Colloquium:
Complex Analysis, Microlocal Calculus and Relativistic Quantum Theory ★Complex analysis, microlocal calculus and relativistic quantum theory. **81e:81003**
Complex analysis, microlocal calculus and relativistic quantum theory ★Complex analysis, microlocal calculus and relativistic quantum theory. **81e:81003**
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Quantum Theory and the Structures of Time and Space ★Quantum theory and the structures of time and space. Vol. 2. **81j:81002a**
★Quantum theory and the structures of time and space. Vol. 3. **81j:81002b**
Current problems in mathematics ★Современные проблемы математики. Том 15. (Russian) [Current problems in mathematics. Vol. 15] **81e:81004**
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Erice ★Hadronic matter at extreme energy density. **81e:81006**
Euclidean quantum field theory ★Евклидова квантовая теория поля. (Russian) [Euclidean quantum field theory] **81f:81002**
Facts and prospects of gauge theories ★Facts and prospects of gauge theories. **81b:81001**
Field theory ★Recent developments in particle and field theory. **81a:81007**
Gauge theory ★Facts and prospects of gauge theories. **81b:81001**
★Geometrical and topological methods in gauge theories. **81e:81005**
Geometrical and topological methods in gauge theories ★Geometrical and topological methods in gauge theories. **81e:81005**
Group theory ★Recent advances in group theory and their application to spectroscopy. **81a:81006**
Hadron structure and lepton-hadron interactions ★Hadron structure and lepton-hadron interactions. **81a:81002**
Hadronic matter at extreme energy density ★Hadronic matter at extreme energy density. **81e:81006**
High-energy physics in the Einstein centennial year ★High-energy physics in the Einstein centennial year. **81a:81003**
Itogi Nauki i Tehniki ★Современные проблемы математики. Том 15. (Russian) [Current problems in mathematics. Vol. 15] **81e:81004**
Jaca ★Quantum chromodynamics. **81i:81004**
Lausanne ★Mathematical problems in theoretical physics. **81f:81003**
Lepton-hadron interactions ★Hadron structure and lepton-hadron interactions. **81a:81002**
Les Houches ★Complex analysis, microlocal calculus and relativistic quantum theory. **81e:81003**
Lie-admissible formulations ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part A. **81a:81005a**
★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. **81a:81005b**
Logico-algebraic approach to quantum mechanics ★The logico-algebraic approach to quantum mechanics. Vol. II. **81i:81003b**
Markov approach ★Евклидова квантовая теория поля. (Russian) [Euclidean quantum field theory] **81f:81002**
Mathematical problems in theoretical physics ★Mathematical problems in theoretical physics. **81f:81003**
Montpellier ★Problèmes théoriques liés aux nouvelles particules. (French) [Theoretical problems associated with the new particles] **81d:81001**
Montreal, Que. ★Geometrical and topological methods in gauge theories. **81e:81005**
NATO Advanced Study Institute:
Recent Advances in Group Theory and their Application to Spectroscopy ★Recent advances in group theory and their application to spectroscopy. **81a:81006**
Orbis Scientiae ★High-energy physics in the Einstein centennial year. **81a:81003**
Particle physics ★Problèmes théoriques liés aux nouvelles particules. (French) [Theoretical problems associated with the new particles] **81d:81001**
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Permutation group in physics and chemistry ★The permutation group in physics and chemistry. **81a:81004**
Physics ★High-energy physics in the Einstein centennial year. **81a:81003**
★The permutation group in physics and chemistry. **81a:81004**
★Mathematical problems in theoretical physics. **81f:81003**
Problèmes théoriques liés aux nouvelles particules ★Problèmes théoriques liés aux nouvelles particules. (French) [Theoretical problems associated with the new particles] **81d:81001**
Proceedings:
Internationale Universitätswochen für Kernphysik ★Facts and prospects of gauge theories. **81b:81001**
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★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. **81a:81005b**
Quantum chromodynamics ★Quantum chromodynamics. **81i:81004**
Quantum field theory ★Евклидова квантовая теория поля. (Russian) [Euclidean quantum field theory] **81f:81002**
Quantum mechanics ★The logico-algebraic approach to quantum mechanics. Vol. II. **81i:81003b**
Quantum theory ★Complex analysis, microlocal calculus and relativistic quantum theory. **81e:81003**
Quantum theory and the structures of time and space ★Quantum theory and the structures of time and space. Vol. 2. **81j:81002a**
★Quantum theory and the structures of time and space. Vol. 3. **81j:81002b**
Recent advances in group theory and their application to spectroscopy ★Recent advances in group theory and their application to spectroscopy. **81a:81006**
Recent developments in particle and field theory ★Recent developments in particle and field theory. **81a:81007**
Schladming ★Facts and prospects of gauge theories. **81b:81001**
Seminar:
G.I.F.T., Theoretical Physics ★Quantum chromodynamics. **81i:81004**
Spectroscopy ★Recent advances in group theory and their application to spectroscopy. **81a:81006**
Summer Institute:
Cargèse, Lepton Structure and Lepton-Hadron Interactions ★Hadron structure and lepton-hadron interactions. **81a:81002**
Summer Research Institute:
Canadian Mathematical Society ★Geometrical and topological methods in gauge theories. **81e:81005**
Geometrical and Topological Methods in Gauge Theories ★Geometrical and topological methods in gauge theories. **81e:81005**
Symposium:
Particles and Fields ★Recent developments in particle and field theory. **81a:81007**
Permutation Group in Physics and Chemistry ★The permutation group in physics and chemistry. **81a:81004**
Theoretical physics ★Quantum chromodynamics. **81i:81004**
Theory of elementary particles extended in space-time ★Theory of elementary particles extended in space-time. **81e:81007**
Tübingen ★Recent developments in particle and field theory. **81a:81007**
Tutzing ★Quantum theory and the structures of time and space. Vol. 2. **81j:81002a**
★Quantum theory and the structures of time and space. Vol. 3. **81j:81002b**
Vorträge der Rheinisch-Westfälischen Akademie der Wissenschaften ★Vorträge der Rheinisch-Westfälischen Akademie der Wissenschaften. No. 288. (German) **81m:81002**
Workshop:
Hadronic Matter at Extreme Energy Density ★Hadronic matter at extreme energy density. **81e:81006**
Lie-Admissible Formulations ★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part A. **81a:81005a**
★Proceedings of the Second Workshop on Lie-Admissible Formulations. Part B. **81a:81005b**

secondary classifications:

(Bardos, Claude) *See* **Bifurcation phenomena in mathematical physics and related topics, (81f:00012)**
(Bessis, Daniel) *See* **Bifurcation phenomena in mathematical physics and related topics, (81f:00012)**
(Friedman, William Albert) *See* **Theoretical methods in medium-energy and heavy-ion physics, (81b:81030)**
(Marlow, A. R.) *See* **Quantum theory and gravitation, (81d:83003)**
(McVoy, K. W.) *See* **Theoretical methods in medium-energy and heavy-ion physics, (81b:81030)**
(Nikolaevskiĭ, V. N.) *See* **Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices, (81e:76018)**
(Stepanov, G. Ju.) *See* **Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices, (81e:76018)**
Algebraic analysis ★Recent development of algebraic analysis. (Japanese) **(81m:58001)**
Analytic varieties and various problems on stratified spaces ★Analytic varieties and various problems on stratified spaces. (Japanese) **(81m:32001)**
Bifurcation phenomena in mathematical physics and related topics ★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**
Cargèse ★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**

Classical and quantum aspects of completely integrable nonlinear systems ★Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) **(81m:35001)**

Free vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

Gravitation ★Quantum theory and gravitation. **(81d:83003)**

Heavy-ion physics ★Theoretical methods in medium-energy and heavy-ion physics. **(81b:81030)**

Madison, Wis. ★Theoretical methods in medium-energy and heavy-ion physics. **(81b:81030)**

Medium-energy physics ★Theoretical methods in medium-energy and heavy-ion physics. **(81b:81030)**

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Bifurcation Phenomena in Mathematical Physics and Related Topics ★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**

Theoretical Nuclear Physics ★Theoretical methods in medium-energy and heavy-ion physics. **(81b:81030)**

New Orleans, La. ★Quantum theory and gravitation. **(81d:83003)**

Nonlinear systems ★Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) **(81m:35001)**

Physics ★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**

Quantum theory and gravitation ★Quantum theory and gravitation. **(81d:83003)**

Quantum vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

Recent development of algebraic analysis ★Recent development of algebraic analysis. (Japanese) **(81m:58001)**

Stability and separation of a boundary layer ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

Stratified spaces ★Analytic varieties and various problems on stratified spaces. (Japanese) **(81m:32001)**

Symposium:

Analytic Varieties and Various Problems on Stratified Spaces ★Analytic varieties and various problems on stratified spaces. (Japanese) **(81m:32001)**

Classical and Quantum Aspects of Completely Integrable Nonlinear Systems ★Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) **(81m:35001)**

Quantum Theory and Gravitation ★Quantum theory and gravitation. **(81d:83003)**

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Theoretical methods in medium-energy and heavy-ion physics ★Theoretical methods in medium-energy and heavy-ion physics. **(81b:81030)**

Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices ★Вихревые движения жидкости. Устойчивость и отрыв пограничного слоя; свободные и квантовые вихри. (Russian) [Vortex motions in a fluid. Stability and separation of a boundary layer; free and quantum vortices] **(81e:76018)**

81Bxx Axiomatics, foundations, philosophy

81B05 General

Aerts, Dirk (*with* Daubechies, Ingrid) Physical justification for using the tensor product to describe two quantum systems as one joint system. **81e:81008**

Agassi, Joseph Quanta in context. **81k:81003**

Alda, Václav Remark on two papers concerning axiomatics of quantum mechanics. (Czech summary) **81k:81004**

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Andrade e Silva, João (*with* Andrade e Silva, Maria) Une expérience possible concernant la nature du dualisme onde-corpuscule. (English summary) **81k:81001**

Andrade e Silva, Maria *See* **Andrade e Silva, João, 81k:81001**

Barchielli, A. (*with* Lanz, L.; Lupieri, G.) A new treatment of macroscopic observables in quantum mechanics. **81h:81002**

Bartell, L. S. Local realism and the Einstein-Podolsky-Rosen paradox. On concrete new tests. **81i:81005**

Barut, Asim Orhan Consequences of a dynamical theory of the Planck's constant $\hbar$ for the origin of quantum theory. **81m:81003**

Bastin, Ted (*with* Noyes, H. Pierre; Amson, John; Kilmister, Clive W.) On the physical interpretation and the mathematical structure of the combinatorial hierarchy. **81e:81009**

Battey-Pratt, E. P. (*with* Racey, T. J.) Geometric model for fundamental particles. **81h:81003**

Bernido, C. (*with* Inomata, A.) Topological shifts in the Aharonov-Bohm effect. **81m:81004**

Borchi, E. (*with* Pelosi, G.) A quantum mechanical derivation of the general uncertainty relation for real signals in communication theory. **81k:81005**

Bressan, Aldo On wave functions in quantum mechanics. I. **81a:81008**

On wave functions in quantum mechanics. II. On fundamental observables and quantistic states. **81a:81009a**

On wave functions in quantum mechanics. III. A theory of quantum mechanics where wave functions are defined by means of surely fundamental observables. **81a:81009b**

de Broglie, Louis ★Jalons pour une nouvelle microphysique. (French) [Foundations for a new microphysics] **81c:81002**

Buonomano, V. Quantum mechanics as a nonergodic classical statistical theory. (Italian and Russian summaries) **81f:81004**

Caianiello, E. R. Some remarks on quantum mechanics and relativity. **81e:81010**

Cerofolini, G. F. Quantum and subquantum mechanics. (Italian and Russian summaries) **81j:81003**

Clauser, B. S. Quantum generalizations of Bell's inequality. **81e:81011**

Collins, R. E. The mathematical basis of quantum mechanics. **81e:81012a**

The mathematical basis of quantum mechanics. II. **81e:81012b**

Comi, M. On the photon position observable. (Italian and Russian summaries) **81e:81013**

Daubechies, Ingrid *See* **Aerts, Dirk, 81e:81008**

Destouches, J.-L. Using de Broglie's physical waves to solve the Einstein-Podolsky-Rosen paradox. (Italian and Russian summaries) **81h:81004**

Domingos, J. M. Time reversal in classical and quantum mechanics. **81c:81003**

Feingold, Susan J. (*with* Peres, Asher) How often are Bell's inequality premises violated? **81h:81005**

Finch, P. D. The formal structure of observational procedures. **81m:81005**

Fujiwara, Izuru Rational construction and physical signification of the quantal time operator. **81h:81006**

Garuccio, A. (*with* Maccarrone, G. D.; Recami, E.; Vigier, J.-P.) On the physical nonexistence of signals going backwards in time, and quantum mechanics. **81i:81006**

George, C. (*with* Prigogine, I.) Coherence and randomness in quantum theory. **81e:81014**

Ghirardi, G. C. (*with* Rimini, A.; Weber, T.) A general argument against superluminal transmission through the quantum mechanical measurement process. **81k:81006**

Giles, Robin The concept of a proposition in classical and quantum physics. **81f:81005**

Good, I. J. The impossibility of complete mutual observation. **81k:81007**

Gotō, Tetsuo (*with* Naka, Sigefumi; Yamaguchi, Katsuhito) The time as an observable in quantum mechanics. **81h:81008**

Green, H. S. Semigroups in relativistic quantum mechanics. **81m:81006**

Healey, Richard Quantum realism: naïveté is no excuse. **81f:81006**

Hennneberger, Walter C. Some aspects of the Aharonov-Bohm effect. **81j:81004**

Inomata, A. *See* **Bernido, C., 81m:81004**

Kálnay, A. J. Unstability and extended variables. **81d:81002**

Kilmister, Clive W. *See* **Bastin, Ted; et al., 81e:81009**

Lanz, L. *See* **Barchielli, A.; et al., 81h:81002**

Lanzinger, S. (*with* Toller, M.) A new approach to correspondence and indeterminacy. **81d:81003**

Lee, V. J. Physical foundations of quantum theory: stochastic formulation and proposed experimental test. **81e:81015**

Lubkin, Ellhu Schrödinger's cat. **81a:81010**

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Marshall, Trevor W. A naive remark concerning the Bohm-Aharonov experiment. **81h:81009**

Moulines, Carlos-Ulises (*with* Sneed, Joseph D.) Suppes' philosophy of physics. (*See* **80m:01040**)

Naka, Sigefumi *See* **Gotō, Tetsuo; et al., 81h:81008**

Newton, Roger G. Quantum action-angle variables for harmonic oscillators. **81d:81004**

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Peres, Asher Measurement of time by quantum clocks. **81e:81016**

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Piron, Constantin Un nouveau principe d'évolution réversible et une généralisation de l'équation de Schrödinger. (English summary) **81e:81017**

Prigogine, I. *See* **George, C., 81e:81014**

Racey, T. J. *See* **Battey-Pratt, E. P., 81h:81003**

Recami, E. *See* **Garuccio, A.; et al., 81i:81006**

Rembieliński, Jakub Notes on the proposed test for complex versus quaternionic quantum theory. **81c:81004**

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Santilli, Ruggero Maria Remarks on the problematic aspects of Heisenberg/Lie/symplectic formulations. **81d:81005**

Sivašinskiĭ, G. I. Turbulence in the motion of a free particle and de Broglie waves. **81e:81018**

Sneed, Joseph D. *See* **Moulines, Carlos-Ulises, (*See* 80m:01040)**

Stairs, Allen On Arthur Fine's interpretation of quantum mechanics. **81f:81007**

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Voroncov, Ju. I. The measurement of the energy-time indeterminacy relation. (Russian) **81f:81008**

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Berezin, F. A. The connection between covariant and contravariant symbols of operators on classical complex symmetric spaces. (Russian) **(81j:32031)**

Crumeyrolle, Albert Construction de déformations d'algèbres au-dessus d'une variété symplectique. (English summary) **(81j:53039)**

Finkelstein, David Quark confinement and time space structure. **(81e:81056)**

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Gaudard, Marie Adèle Dispersion free weights, maximal refinement ideals, and atomicity in certain generalized sample spaces. **(81d:06011)**

Gotay, Mark J. Functorial geometric quantization and Van Hove's theorem. **(81g:58016)**

Gotō, Tetsuo *See* **Naka, Sigefumi, (81e:81042)**

Harper, P. G. The single-particle ensemble and its complex representation. **(81d:82004)**

(Hermann, Armin) *See* **Pauli, Wolfgang, (81c:01034)**

Lichnerowicz, André Dérivations et automorphismes pour des algèbres formelles

associées par déformation à une variété symplectique. (English summary) **(81e:58028)**
(von Meyenn, Karl) *See* **Pauli, Wolfgang, (81c:01034)**
Naka, Sigefumi (*with* Gotō, Tetsuo) A method of quantization of constrained dynamical systems. **(81d:81042)**
Pappas, P. T. On velocity and the transverse Doppler effect in the six-dimensional space. A hidden-variable model? **(81i:83010)**
Pauli, Wolfgang ★Wissenschaftlicher Briefwechsel mit Bohr, Einstein, Heisenberg u.a. Band I: 1919–1929. (German) [Scientific correspondence with Bohr, Einstein, Heisenberg and others. Vol. I: 1919–1929] **(81c:01034)**
Sneed, Joseph D. ★The logical structure of mathematical physics. **(81d:03008)**
Takeuti, Gaisi Boolean valued analysis. **(81c:03045)**
(Weisskopf, Victor F.) *See* **Pauli, Wolfgang, (81c:01034)**
Correspondence:
Pauli, Wolfgang *See* **Pauli, Wolfgang, (81c:01034)**

81B10 Logical foundations of quantum mechanics

Aerts, Dirk (*with* Daubechies, Ingrid) About the structure-preserving maps of a quantum mechanical propositional system. **81h:81010**
(*with* Daubechies, Ingrid) A connection between propositional systems in Hilbert spaces and von Neumann algebras. **81e:81019**
Bub, J. Conditional probabilities in non-Boolean possibility structures. **81k:81007**
Bugajski, Stawomir (*with* Lahti, Pekka J.) Fundamental principles of quantum theory. **81h:81011**
Čilin, V. I. Uniformities and estimates on logics. (Russian) **81j:81005**
Cramer, John G. Generalized absorber theory and the Einstein-Podolsky-Rosen paradox. **81e:81020**
Daubechies, Ingrid *See* **Aerts, Dirk, 81e:81019** *and* **Aerts, Dirk, 81h:81010**
Dvurečenskij, Anatolij Laws of large numbers and the central limit theorems on a logic. (Russian summary) **81a:81011**
Finkelstein, David Process philosophy and quantum dynamics. **81d:81006**
Frescura, F. A. M. (*with* Hiley, B. J.) The implicate order, algebras, and the spinor. **81d:81007**
Garola, C. Propositions and orthocomplementation in quantum logic. **81f:81009**
Gudder, Stanley P. Axiomatic operational quantum mechanics. **81h:81012**
Guz, Wawrzyniec Pure operations and the covering law. **81f:81010**
Conditional probability in quantum axiomatics. **81k:81008**
Event-phase-space structure: an alternative to quantum logic. **81d:81008**
Hellman, Geoffrey A probabilistic version of the Kochen-Specker no-hidden-variable proof. **81g:81003**
Hiley, B. J. *See* **Frescura, F. A. M., 81d:81007**
Lahti, Pekka J. On the expectation value of an observable in quantum logic. (Russian summary) **81i:81007**
See also **Bugajski, Stawomir, 81h:81011**
Mermin, N. D. Quantum mechanics vs. local realism near the classical limit: a Bell inequality for spin s. **81i:81008**
Pulmannová, Sylvia Superposition principle and sectors in quantum logics. **81f:81011**
Superpositions of states and a representation theorem. **81k:81009**
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When do projections commute? **81h:81013**
Sharma, C. S. Mackey's eighth axiom and quantum logics. **81k:81010**
Stachow, E. W. An operational approach to quantum probability. **81a:81012**
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Alfsen, Erik M. On the state spaces of Jordan and C^*-algebras. (French summary) **(81c:46050)**
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Drisch, Thomas Generalization of Gleason's theorem. **(81g:46092)**
van Fraassen, Bas C. Hidden variables and the modal interpretation of quantum theory. **(81e:03059)**
Georgacarakos, G. N. Orthomodularity and relevance. **(81c:03014)**
(Hooker, C. A.) *See* **Logico-algebraic approach to quantum mechanics, (81i:81003a)** *and* **Logico-algebraic approach to quantum mechanics, (81i:81003b)**
Ingleby, Michael (*with* Tonga, Marcel) Operator-valued Daniell spaces and observables. **(81j:28019)**
Marlow, A. R. An extended quantum mechanical embedding theorem. **(81f:06004)**
Mittelstaedt, Peter The modal logic of quantum logic. **(81d:03060)**
Nishimura, Hirokazu Sequential method in quantum logic. **(81h:03122)**
Sneed, Joseph D. ★The logical structure of mathematical physics. **(81d:03008)**
Stachow, E. W. Logical foundation of quantum mechanics. **(81g:03076)**
Stout, Lawrence Neff Laminations, or how to build a quantum-logic-valued model of set theory. **(81i:03099)**
Tonga, Marcel *See* **Ingleby, Michael, (81j:28019)**
Logico-algebraic approach to quantum mechanics ★The logico-algebraic approach to quantum mechanics. Vol. I. **(81i:81003a)**
★The logico-algebraic approach to quantum mechanics. Vol. II. **(81i:81003b)**
Quantum mechanics ★The logico-algebraic approach to quantum mechanics. Vol. I. **(81i:81003a)**
★The logico-algebraic approach to quantum mechanics. Vol. II. **(81i:81003b)**

81B99 None of the above, but in this section

Bagchi, S. N. Fundamental equations of classical and of quantum physics as special cases of a nonlinear equation. **81k:81011**
Bunge, Mario The Einstein-Bohr debate over quantum mechanics: who was right about what? **81h:81014**
Davidson, Mark The origin of the algebra of quantum operators in the stochastic formulation of quantum mechanics. **81a:81013**
Foulis, David J. *See* **Frazer, Patricia J.; et al., 81g:81004**
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Fronsdal, Christian Some ideas about quantization. **81a:81014**
Giovannini, N. (*with* Piron, Constantin) On the group-theoretical foundations of classical and quantum physics: kinematics and state spaces. **81c:81005**
Piron, Constantin *See* **Giovannini, N., 81c:81005**
Randall, Charles H. *See* **Frazer, Patricia J.; et al., 81g:81004**
Simanov, A. L. A physical picture of the world and the concept of "state" as its element. (Russian) **81g:81005**
Wittstock, Gerd Matrix order and W^*-algebras in the operational approach to statistical physical systems. **81j:81006**

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Benioff, Paul The computer as a physical system: a microscopic quantum mechanical Hamiltonian model of computers as represented by Turing machines. **(81m:68040)**
Constantinescu, P. (*with* Nicolau, Edmond; Nicorovici-Porumbaru, N. Al.) Systems, models, invariance. (*See* **81j:93006a**)
Costa de Beauregard, Olivier Collapse du Ψ et covariance relativiste. (English summary) **(81m:83005)**
Gudder, Stanley P. (*with* Hudson, R. L.) A noncommutative probability theory. **(81m:46092)**
Holevo, A. S. Covariant measurements and uncertainty relations. **(81j:81027)**
Hudson, R. L. *See* **Gudder, Stanley P., (81m:46092)**
Kunin, I. A. Group deformations and quantizations. **(81f:22038)**
Nicolau, Edmond *See* **Constantinescu, P.; et al., (** *see* **81j:93006a)**
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81Cxx General mathematical topics and methods in quantum mechanics

secondary classifications:

Belov, V. V. (*with* Vorob'ev, E. M.) ★Сборник задач по дополнительным главам математической физики. (Russian) [A collection of problems in supplementary chapters of mathematical physics] **(81k:00003)**
Vorob'ev, E. M. *See* **Belov, V. V., (81k:00003)**

81C05 Closed and approximate solutions to the Schrödinger, Dirac, Klein-Gordon and other quantum mechanical equations

Adam, Gh. A global numerical solution of the radial Schrödinger equation by second-order perturbation theory. (French summary) **81g:81006**
(*with* Adam, S.; Corciovei, A.) Local and accumulated truncation errors in a class of perturbative numerical methods. (French summary) **81g:81007**
Adam, S. *See* **Adam, Gh.; et al., 81g:81007**
Agaeva, R. G. Nonadiabatic parametric excitation of oscillator-type systems. **81d:81009**
Aguilera-Navarro, V. C. (*with* Ley Koo, E.; Zimerman, A. H.) Perturbative, asymptotic and Padé-approximant solutions for harmonic and inverted oscillators in a box. **81j:81007**
Aldrovandi, R. (*with* Leal Ferreira, P.) Quantum pendulum. **81e:81021**
Amar, V. (*with* Dozzio, U.; Oleari, C.) Causal propagation in second-order relativistic wave equations. (Italian and Russian summaries) **81k:81012**
Angelié, C. (*with* Deutsch, C.) Relativistic hydrogen atom in superstrong magnetic fields. **81m:81008**
(*with* Deutsch, C.) Semiclassical approach to the strongly magnetized hydrogen atom. **81m:81009**
Askar, Attila *See* **Augustin, Stuart D.; et al., 81d:81010**
Augustin, Stuart D. (*with* Demiralp, Metin; Rabitz, Herschel; Askar, Attila) Action-angle variables for the quantum three-particle system. **81d:81010**
Austin, E. J. Perturbation theory and Padé approximants for a hydrogen atom in an electric field. **81e:81022**
Bagrov, V. G. (*with* Gitman, D. M.; Suhomlin, N. B.; Šapovalov, A. V.; Šapovalov, V. N.) New exact solutions of the Dirac equation. VII. (Russian) **81a:81015a**
(*with* Gitman, D. M.; Zadorožnyĭ, V. N.; Suhomlin, N. B.; Šapovalov, V. N.) New exact solutions of the Dirac equation. VIII. (Russian) **81a:81015b**
(*with* Gitman, D. M.; Zadorožnyĭ, V. N.; Šapovalov, A. V.; Šapovalov, V. N.) New exact solutions of the Dirac equation. IX. (Russian) **81a:81015c**
Barthelat, J. C. (*with* Pélissier, M.; Durand, Ph.) Analytical relativistic self-consistent-field calculations for atoms. **81g:81008**
Barut, Asim Orhan (*with* Berrondo, M.; García Calderón, G.) Narrow resonances as an eigenvalue problem and applications to high energy magnetic resonances: an exactly soluble model. **81e:81023**
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Bialynicki-Birula, Iwo On the stability of solitons. **81g:81009**
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Biswas, S. N. *See* **Singh, Virendra; et al., 81e:81036**
Blume, M. Comments on: "Quantum system subject to random pulses" [J. Math. Phys. **18** (1977), no. 7, 1327–1329; MR 81e:81038b]. **81e:81038c**
Bose, S. K. (*with* Tripathy, D. N.) Uniformly damped general coupled anharmonic oscillators and the coherent state representation. **81k:81013**
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Bullough, R. K. *See* **Kitchenside, P. W.; et al.,** (*See* **80b:81002**)
Burgan, J. R. (*with* Feix, M. R.; Fijalkow, E.; Munier, A.) Solution of the multidimensional quantum harmonic oscillator with time-dependent frequencies through Fourier, Hermite and Wigner transforms. **81k:81014**
Burt, Philip B. Energy bands in nonlinear Schrödinger equations. **81i:81010**
Multidimensional kink solutions of the double sine-Gordon equation. **81e:81024**
Bycenko, A. A. (*with* Ktitorov, S. A.) Soliton solutions of the nonlinear Schrödinger equation with an external time-dependent field. **81m:81010**
Cabucci, G. On the Dirac equation in a linear potential. **81e:81025**
Calvo, Miguel Nonrelativistic quantum theory of spinning particles in helical magnetic fields. **81a:81016**
Caprasse, H. Remarks on the scaling properties of the Schrödinger equation. **81a:81017**
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Čerednik, I. V. A generalization of Korteweg-de Vries and sine-Gordon differential equations. (Russian) **81d:81012**
Chadan, Khosrow (*with* Martin, André) Une condition suffisante pour l'existence d'états liés dans un potentiel sans symétrie particulière. (English summary) **81a:81018**
Chen, Augustine C. Hydrogen atom as a four-dimensional oscillator. **81d:81013**
Christiansen, Peter L. (*with* Olsen, O. H.) Return effect for rotationally symmetric solitary wave solutions to the sine-Gordon equation. **81m:81011**
Corciovei, A. *See* **Adam, Gh.; et al., 81g:81007**
Crowley, B. J. B. Semiclassical techniques for treating the one-dimensional Schrödinger equation: uniform approximations and oscillatory integrals. **81c:81006**
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Davies, E. B. Some time-dependent Hartree equations. **81i:81011**
Demiralp, Metin *See* **Augustin, Stuart D.; et al., 81d:81010**
Demkov, Ju. N. (*with* Komarov, I. V.) Hypergeometric particular solutions in the two-centre Coulomb problem. (Russian. English summary) **81a:81019**
Deutsch, C. *See* **Angellé, C., 81m:81008** *and* **Angellé, C., 81m:81009**
Devreese, J. T. *See* **Ringwood, G. A., 81d:81017**
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Dimaško, Ju. A. *See* **Granovskiĭ, Ja. I., 81g:81011**
Dmitrieva, I. K. (*with* Plindov, G. I.) Energy approximants and perturbation theory. **81j:81009**
Dodonov, V. V. (*with* Kurmyšev, E. V.; Man'ko, V. I.) Exact Green function of a damped oscillator. **81i:81012**
Dozzio, U. *See* **Amar, V.; et al., 81k:81012**
Dumont-Lepage, M. Cl. (*with* Gani, N.; Gazeau, J. P.; Ronveaux, A.) Spectrum of potentials $gr^{-(\nu+2)}$ via SL(2, R) acting on quaternions. **81i:81013**
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Swamy, N. V. V. J. *See* **Wilson, W. B., (81i:35152)**

Swanson, Charles A. *See* **Noussair, Ezzat S., (81i:35045)**

Thomas, Lawrence E. Birman-Schwinger bounds for the Laplacian with point interactions. **(81h:35036)**

Úlehla, Ivan *See* **Hájšová, D.; et al., (81a:34023)**

Wang, Shein Shion *See* **Leibbrandt, George; et al., (81f:35106)**

Wilson, W. B. (*with* Swamy, N. V. V. J.) Note on Bäcklund transformations, Dirac factorization and the sine-Gordon equation. (Italian summary) **(81i:35152)**

Yamagata, Hideo On blizzard solutions as "superpositions" of c solitons with real speeds. **(81b:35089)**

On Bäcklund transformation associated with the sine-Gordon equation in 3+1 dimensions. **(81k:35154)**

Zaharov, V. E. (*with* Manakov, S. V.; Novikov, S. P.; Pitaevskiĭ, L. P.) ★Теория солитонов. (Russian) [Theory of solitons] **(81g:35112)**

(*with* Schulman, E. I.) Degenerative dispersion laws, motion invariants and kinetic equations. **(81j:35077)**

Ždanov, V. I. Low-frequency solutions of wave equations in Schwarzschild space. (Russian) **(81d:83047)**

81C10 Selfadjoint operator theory in quantum mechanics; essential selfadjointness of the Hamiltonian

Aizenman, Michael (*with* Lieb, Elliott H.) On semiclassical bounds for eigenvalues of Schrödinger operators. **81m:81020**

Christensen, Mark J. (*with* Piepenbrink, John) Quantum dynamics of Hamiltonians perturbed by pulses. **81e:81038a**

Čurišov, I. D. Stability of regularizations of the many-particle Schrödinger operator with singular repulsive two-body potential. (Russian. English summary) **81f:81016**

Friedland, Shmuel *See* **Moiseyev, Nimrod, 81g:81013**

Gesztesy, F. (*with* Pittner, L.) Uncertainty relations and quadratic forms. **81a:81028**

Grossmann, A. (*with* Tip, A.) Hydrogen atoms interacting with a quantised radiation mode. **81i:81022**

Günther, C. *See* **Hunziker, W., 81k:81022**

Hunziker, W. (*with* Günther, C.) Bound states in dipole fields and continuity properties of electronic spectra. **81k:81022**

Klaus, Martin Removing cut-offs from one-dimensional Schrödinger operators. **81k:81023**

Lieb, Elliott H. *See* **Aizenman, Michael, 81m:81020**

Miller, Keith (*with* Simon, B.) Quantum magnetic Hamiltonians with remarkable spectral properties. **81d:81022**

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Pittner, L. *See* **Gesztesy, F., 81a:81028**

Poslewnik, Andrzej A sufficient condition for the Hamiltonian evolution. **81j:81013**

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Tip, A. *See* **Grossmann, A., 81i:81022**

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Perel'muter, M. A. (*with* Semenov, Ju. A.) Selfadjointness of elliptic operators with a finite and with an infinite number of variables. (Russian) **(81i:35046)**

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Monotone continuity of the spectral resolution and the eigenvalues. **(81j:47018)**

Whelan, C. T. Some remarks on the commutation relations for angle-angular momentum variables in quantum mechanics. **(81e:81055)**

81C12 Perturbation theory for operators

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Banerjee, K. Rescaling the perturbation series. **81a:81029**

Battezzati, M. On the evaluation of second-order matrix elements of perturbation theory by variational methods. (Italian and Russian summaries) **81b:81002**

Bès, D. R. (*with* Dussel, G. G.; Perazzo, R. P. J.) Perturbative treatment of nuclear rotations: two-dimensional case. **81g:81014**

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Gottdiener, L. The anharmonic oscillator: classical case vs. quantum case. (Spanish. English summary) **81b:81003**

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Jamieson, M. J. Scaling and Padé approximants in perturbation theory. **81k:81025**

Kalia, S. (*with* Bali, L. M.; Roy, Sharmistha B.) On the Schrödinger equation for a perturbation problem. **81d:81024**

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Katriel, Jacob On the divergence of perturbation theory for anharmonic oscillators. **81i:81023**

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Klaus, Martin A remark about weakly coupled one-dimensional Schrödinger operators. **81c:81011**

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Marchesini, Giovanni (*with* Onofri, E.) Planar limit for SU(N) symmetric quantum

dynamical systems. **81i:81024**

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Mower, Lyman Projection-operator approach to perturbation theory. **81k:81024**

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Ounes, E. *See* **Leinaas, J. M., 81c:81040**

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Rauch, Jeffrey Perturbation theory for eigenvalues and resonances of Schrödinger Hamiltonians. **81g:81016**

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de Vega, H. J. Large orders in the $1/N$ perturbation theory by inverse scattering in one dimension. **81g:81017**

Villani, M. *See* **Nitti, L.; et al., 81d:81025**

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Critchley, Raymond *See* **Unwin, S. D., (81k:81052)**

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(*with* Voros, A.) Semiclassical approximations for nuclear Hamiltonians. II. Spin-dependent potentials. **(81m:81077b)**

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Ioffe, M. V. *See* **Borisov, N. V.; et al., (81h:81130)**

Jeziorski, Bogumil (*with* Schwalm, William A.; Szalewicz, Krzysztof) Analytic continuation in exchange perturbation theory. **(81k:81111)**

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Llewellyn-Smith, C. H. Deep inelastic phenomena. **(81c:81058)**

Maslov, E. M. On the perturbation theory for solitons in the second approximation. (Russian. English summary) **(81m:35127)**

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Prigožin, S. A. *See* **Borisov, N. V.; et al., (81h:81130)**

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Shaw, Peter B. *See* **Whitfield, George, (81c:82024)**

Szalewicz, Krzysztof *See* **Jeziorski, Bogumil; et al., (81k:81111)**

Szasz, Levente $X\alpha$ method with pseudopotentials. **(81e:81160)**

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Voros, A. *See* **Balian, R.; et al., (81b:41083); Grammaticos, B., (81m:81077a)** *and* **Grammaticos, B., (81m:81077b)**

Whitfield, George (*with* Shaw, Peter B.) Breakdown of perturbation theory for the deformation potential polaron. **(81c:82024)**

Yoshimura, Tetz Electromagnetic self-energy of charged fields in non-Minkowskian spacetime and gauge dependence of mass renormalization. **(81i:81065)**

81C15 Perturbation theory for differential equations; WKB techniques

Voros, A. Symbol calculus by symbolic computation and semiclassical expansions. **81i:81025**

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Chazarain, Jacques Comportement semi classique du spectre d'un hamiltonien quantique. **(81j:35088)**

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Lambert, F. Padé approximants and closed form solutions of the KdV and MKdV equations. **(81d:35071)**

Yngve, Staffan *See* **Fröman, Nanny, (81k:81108)**

81C20 Probabilistic methods in quantum mechanics, including stochastic electrodynamics

Albeverio, Sergio (*with* Høegh-Krohn, Raphael; Streit, L.) Regularization of Hamiltonians and processes. **81g:81018**

Anderson, James B. Quantum chemistry by random walk: higher accuracy. **81i:81026**

Bach, A. Quantum mechanics and integration in Hilbert space. **81j:81014**

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Bass, J. Moyennes et mesures en mécanique quantique et en mécanique classique. (English summary) **81m:81023**

Baumgartner, Bernhard Measure-theoretic ergodic theory in quantum mechanics. **81k:81025**

Canivell, V. (*with* Seglar, P.) Note on the parity operator. **81m:81024**

Claverie, P. *See* **Marshall, Trevor W., 81k:81026**

Cohen, Leon (*with* Zaparovanny\u{i}, Ju. I.) Positive quantum joint distributions. **81d:81027**

Cufaro Petroni, N. (*with* Vigier, J.-P.) Stochastic derivation of Proca's equation in terms of a fluid of Weyssenhoff tops endowed with random fluctuations at the velocity of light. **81j:81015**

(*with* Vigier, J.-P.) Stochastic derivation of the Dirac equation in terms of a fluid of spinning tops endowed with random fluctuations at the velocity of light. **81m:81025**

Davidson, Mark A model for the stochastic origins of Schrödinger's equation. **81a:81031**

A dynamical theory of Markovian diffusion. **81a:81032**

Filippakis, Th. *See* **Jannussis, A. D.; et al., 81i:81029**

Filippakis, P. *See* **Jannussis, A. D.; et al., 81i:81029**

García Calderón, G. (*with* Moshinsky, M.) Wigner distribution functions and the representation of canonical transformations in quantum mechanics. **81d:81028**

Gaveau, Bernard Fonctions propres et non-existence absolue d'états liés dans certains systèmes quantiques. (English summary) **81i:81027**

Hashimoto, Naoki Comments on the stochastic quantization of the friction. **81b:81005**

Høegh-Krohn, Raphael *See* **Albeverio, Sergio; et al., 81g:81018**

Hoffmann-Ostenhof, M. (*with* Hoffmann-Ostenhof, Thomas; Simon, B.) Brownian motion and a consequence of Harnack's inequality: nodes of quantum wave functions. **81g:81019**

Hoffmann-Ostenhof, Thomas *See* **Hoffmann-Ostenhof, M.; et al., 81g:81019**

Ioriatti, Liderio (*with* Isihara, A.) Wigner function of a two-dimensional electron gas in a magnetic field. **81i:81028**

Isihara, A. *See* **Ioriatti, Liderio, 81i:81028**

Jannussis, A. D. (*with* Filippakis, P.; Filippakis, Th.) Quantum friction in phase space. **81i:81029**

Lavenda, B. H. *See* **Santamato, E., 81e:81042**

Marshall, Trevor W. (*with* Claverie, P.) Stochastic electrodynamics of nonlinear systems. I. Particle in a central field of force. **81h:81026**

Moshinsky, M. *See* **García Calderón, G., 81d:81028**

Namsrai, H. Relativistic Feynman-type integrals. **81e:81041**

Nelson, Edward Connection between Brownian motion and quantum mechanics. **81h:81027**

Park, James L. (*with* Band, William; Yourgrau, Wolfgang) Simultaneous measurement, phase-space distributions, and quantum state determination. (German summary) **81h:81028**

Santamato, E. (*with* Lavenda, B. H.) The stochastic action integral interpretation of the quantum-mechanical transformation function. **81e:81042**

Seglar, P. *See* **Canivell, V., 81m:81024**

Shucker, David S. Davidson's generalization of the Fényes-Nelson stochastic model of quantum mechanics. **81g:81020**

Simon, B. *See* **Hoffmann-Ostenhof, M.; et al., 81g:81019**

Streit, L. *See* **Albeverio, Sergio; et al., 81g:81018**

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Yasue, Kunio Stochastic quantization: a review. **81i:81030**

Schrödinger's variational method of quantization revisited. **81g:81021**

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Zaparovanny\u{i}, Ju. I. *See* **Cohen, Leon, 81d:81027**

Zlatev, I. S. Quasiprobability distributions in quantum mechanics and quantity-operators correspondences. **81b:81006**

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Abdullaev, F. H. (*with* Abdumalikov, A. A.; Rahmatov, A. S.) Solution of a nonlinear parabolic equation with random coefficients. (Russian) **(81m:35141)**

Abdumalikov, A. A. *See* **Abdullaev, F. H.; et al., (81m:35141)**

Amiet, J.-P. (*with* Huguenin, P.) Currents and local currents in Galilean quantum mechanics. **(81h:81050)**

Burgan, J. R. (*with* Feix, M. R.; Fijalkow, E.; Munier, A.) Solution of the multidimensional quantum harmonic oscillator with time-dependent frequencies through Fourier, Hermite and Wigner transforms. **(81k:81014)**

Carmona, René Regularity properties of Schrödinger and Dirichlet semigroups. **(81k:47052)**

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Davidson, Mark The generalized Fényes-Nelson model for free scalar field theory. **(81g:81064)**

Dvurečenskij, Anatolij Laws of large numbers and the central limit theorems on a logic. (Russian summary) **(81a:81011)**

Feix, M. R. *See* **Burgan, J. R.; et al., (81k:81014)**

Fijalkow, E. *See* **Burgan, J. R.; et al., (81k:81014)**

Gaveau, Bernard (*with* Trauber, Philip) L'intégrale stochastique comme opérateur de divergence dans l'espace de Fock. (English summary) **(81j:60066)**

Harper, P. G. The single-particle ensemble and its complex representation. **(81d:82004)**

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Huguenin, P. *See* **Amiet, J.-P., (81h:81050)**

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Malyšev, V. A. (*with* Terleckiĭ, Ju. A.) A limit theorem for noncommutative fields. (Russian. English summary) **81d:60009**
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Rimini, A. (*with* Zambotti, G.) Initial and regime situations in the decay of unstable quantum systems. (Italian summary) **81e:81065**
Scully, Marlan O. *See* Lee, Hai Woong, **81h:81172**
Simon, B. Brownian motion, L^p properties of Schrödinger operators and the localization of binding. **81c:35033**
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81C30 Feynman integrals and graphs; applications of algebraic topology and algebraic geometry to these problems [See also 14D05, 32B30.]

Bergère, M. C. Asymptotic behaviour of Feynman integrals. **81h:81029**
Bhattacharjee, Jayanta K. (*with* Ferrell, Richard A.) Analytic properties of the critical dynamics ε expansion. **81g:81022**
Bleher, P. M. Dual Feynman amplitudes. (Russian. English summary) **81c:81014**
Proof of the existence of an analytic extension of Feynman integrals with massless propagators. (Russian. English summary) **81c:81015**
Bros, Jacques (*with* Manolessou-Grammaticou, Marietta) Renormalized G-convolution of N-point functions in quantum field theory. I. Convergence in the Euclidean case. Part 1. **81k:81026a**
(*with* Manolessou-Grammaticou, Marietta) Renormalized G-convolution of N-point functions in quantum field theory. I. Convergence in the Euclidean case. Part 2. **81k:81026b**
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Horiuchi, Hisashi *See* Fujiwara, Yoshikazu, **81g:81023**
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Lichnerowicz, André Déformations et quantification. **(81b:58020)**
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Rivasseau, V. (*with* Speer, E.) The Borel transform in Euclidean φ_3^4 local existence for $\mathrm{Re}\,\nu<4$. **(81e:81063)**
Schneider, Michael *See* Okonek, Christian; et al., **(81b:14001)**
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81C35 Path integrals [See also 28C20, 58D30.]

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On a nature of convergence of some Feynman path integrals. II. **81k:81028b**
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81D10 Bethe-Salpeter equation

Caussignac, Ph. (*with* Wanders, G.) Bethe-Salpeter bound states in the ladder approximation with effective propagators and vacuum stability. (Italian and Russian summaries) **81d:81038**
Henley, John R. Relativistic harmonic oscillator for spin-$\frac{1}{2}$ particles in the Bethe-Salpeter formalism. **81e:81056**
Setô, Noriaki Suppression of abnormal solutions below a critical coupling strength in a spinor-type Bethe-Salpeter equation. **81k:81045**
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Langbein, W. High-momentum transfers and completeness of the Mandelstam program in potential scattering. (Italian and Russian summaries) **(81e:81113)**

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Garber, W. D. (*with* Reeh, H.) On the structure of symmetry generators. **81f:81028**
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Zaikov, R. P. Supersymmetric generalized nonlinear sigma models. An infinite set of nonlocal conserved currents and instantonlike solutions. (Russian summary) **(81k:81159)**

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Hamiltonian of the massive Yang-Mills theory. **81i:81048**

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Flato, Moshé (*with* Simon, Jacques) Linearization of relativistic nonlinear wave equations. **81f:81033**

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Garbaczewski, Piotr Non-Grassmann quantization of the Dirac system. **81j:81033**

Gomis, J. (*with* Poch, A.; Pons, J. M.) Poincaré wave equations as Fourier transforms of Galilei wave equations. **81j:81034**

Grib, A. A. (*with* Mostepanenko, V. M.) Spontaneous breaking of gauge and discrete symmetries in curved space-time. (Russian) **81h:81060**

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Marnelius, Robert (*with* Nilsson, Bengt) Manifestly conformally covariant field equations and a geometrical understanding of mass. **81i:81049**

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Rañada, Antonio F. (*with* Sierra Rodero, Germán) Causality of wave equation and invariance of its hyperbolicity conditions. **81j:81036**

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(*with* Vigier, J.-P.) Stochastic derivation of the Dirac equation in terms of a fluid of spinning tops endowed with random fluctuations at the velocity of light. **(81m:81025)**

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Mathews, P. M. (*with* Govindarajan, T. R.; Seetharaman, M.; Prabhakar, J.) Relativistic wave equations coupled to external fields: an algebraic study of the problem of constraints. **(81j:81061)**

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Salingaros, Nikos Realization and classification of the universal Clifford algebras as associative Lie-admissible algebras. **(81d:16026)**

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81D30 Coherent states

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Augustin, Stuart D. (*with* Rabitz, Herschel) Action-angle variables in quantum mechanics. **81a:81042**

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Cartier, Pierre Théorie de la diffusion pour l'équation de Schrödinger. **(81e:35100)**
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Hirota, Ryogo (*with* Ramani, Alfred) The Miura transformations of Kaup's equation and of Mikhailov's equation. **(81k:35144)**
Ingolnitzer, Daniel Microcausality, macrocausality and the physical region (micro)analytic S-matrix. **(81m:81037)**
Narnhofer, Heide On asymptotic completeness in scattering theory. **(81c:81047)**
Pooran, R. *See* **Darewych, J. W., (81i:81083)**
Ramani, Alfred *See* **Hirota, Ryogo, (81k:35144)**
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★Wave algebras and scattering theory. II. **(81b:47010b)**
Yajima, Kenji An abstract stationary approach to three-body scattering. **(81g:47009)**

81F15 S-matrix theory, etc.

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(*with* Chudnovsky, Gregory V.) The construction of factorized S-matrices—the relationships between the Baxter model and "Zamolodchikov algebras". **81m:81061**
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Fedorov, F. I. Covariant calculation of matrix elements. (Russian) **81g:81085**
Goldflam, R. (*with* Kowalski, K. L.) Particle identity and the optical potential for elastic two-fragment collisions. **81h:81118**
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Heiss, W. D. Vertex function and crossing symmetry. **81d:81094**
Il'in, V. A. (*with* Slavnov, D. A.) S-matrix with nonlocal classical sources. (Russian. English summary) **81g:81086**
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Johnson, P. W. Construction of Regge amplitudes through solution of S-matrix equations. **81d:81095**
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de los Reyes, J. (*with* Mello, P. A.; Seligman, Thomas H.) Analyticity and ergodicity in the maximum-entropy approach to statistical nuclear reactions. **81e:81114**
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Čerednik, I. V. Some S-matrices connected with abelian varieties. (Russian) **(81d:14013)**
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French, J. B. (*with* Mello, P. A.; Pandey, Akhilesh) Statistical properties of many-particle spectra. II. Two-point correlations and fluctuations. **(81h:82004a)**
(Friedman, William Albert) *See* **Theoretical methods in medium-energy and heavy-ion physics, (81h:81030)**
García Calderón, G. *See* **Barut, Asim Orhan; et al., (81e:81023)**
Gogohlja, V. Š. Solution of a quasipotential boundary value problem by the comparison equation method. (Russian. Georgian and English summaries) **(81h:34024)**
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(McVoy, K. W.) *See* **Theoretical methods in medium-energy and heavy-ion physics, (81h:81030)**
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Paiva, Viliam The new path integrals representation of a potential scattering amplitude. (Russian summary) **(81k:81031)**
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Vyšenskiĭ, S. V. (*with* Meunargija, O. V.) Asymptotics of the pion electromagnetic form-factor in a new phase representation. (Russian. English summary) **(81i:81096)**
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Medium-energy physics ★Theoretical methods in medium-energy and heavy-ion physics. **(81h:81030)**
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Theoretical Nuclear Physics ★Theoretical methods in medium-energy and heavy-ion physics. **(81h:81030)**
Theoretical methods in medium-energy and heavy-ion physics ★Theoretical methods in medium-energy and heavy-ion physics. **(81h:81030)**

81F30 Dispersion theory, dispersion relations

Creamer, Dennis B. (*with* Thacker, H. B.; Wilkinson, David) Gel'fand-Levitan method for operator fields. **81a:81084**
Kurbatov, A. F. Generalized principle of the argument and logarithmic sum rules. (Russian. English summary) **81i:81090**
Muzafarov, V. M. On the well-posedness of the formulation without potential of the inverse scattering problem. (Russian. English summary) **81f:81073**
Rauzillier, I. Constraints on low energy Compton scattering amplitudes. (French summary) **81a:81085**
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Alekseev, A. I. (*with* Arbuzov, B. A.; Rodionov, A. Ja.) The possibility of dynamical mass generation in finite quantum electrodynamics. (Russian. English summary) **(81k:81124)**
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Biedenharn, L. C. *See* **Mukunda, N.; et al., (81k:81034)**
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81F99 None of the above, but in this section

Anderson, Brian D. O. (*with* Kailath, Thomas) Fast algorithms for the integral equations of the inverse scattering problem. **81k:81087**
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Micha, David A. *See* **Bosanac, S., 81k:81088**
Moses, H. E. Gel'fand-Levitan equations with comparison measures and comparison potentials. **81a:81087**
Mrugała, F. Relationships among $\mathcal{R}$-matrix propagation, amplitude density function and invariant imbedding methods. **81e:81119**
Newton, Roger G. Inverse scattering. I. One dimension. **81m:81066a**
Inverse scattering. II. Three dimensions. **81m:81066b**
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Ovsjannikov, V. D. *See* **Manakov, N. L., 81d:81097**
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Poet, R. Symmetrically coupled partial differential equations in scattering. I. Model electron-hydrogen collisions. **81k:81089**
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secondary classifications:

Allegretto, Walter Finiteness of lower spectra of a class of higher order elliptic operators. **(81d:35063)**
Amrein, W. O. (*with* Pearson, D. B.) The *S*-matrix for abstract scattering systems. **(81i:47013)**
Andres, Stephen A. Scattering theory and pseudodifferential operators. (Spanish summary) **(81i:47014)**
Atkinson, D. Analytic extrapolations and inverse problems. **(81d:30003)**
Barg, G.-D. (*with* Drolshagen, G.) Reactive and inelastic sudden rotational approximation in the body-fixed frame. **(81a:81118)**
Bengaria, R. *See* **Levi, D., (81j:35104)**
Borzov, V. V. Asymptotic distribution of eigenvalues of a second-quantized operator. (Russian) **(81d:58055)**
Bruschi, Massimo (*with* Levi, D.; Ragnisco, O.) Toda lattice and generalised Wronskian technique. **(81e:35007)**
Buldyrev, V. S. (*with* Grigor'eva, N. S.) Uniform dispersion equation in the multichannel problem. (Russian. English summary) **(81d:34025)**
Bullough, R. K. *See* **Sasaki, R., (81h:58008)**
Caudrey, P. J. The inverse problem for the third order equation $u_{xxx} + q(x)u_x + r(x)u = -i\xi^3 u$. **(81k:34016)**
Common, A. K. (*with* Stacey, T. W.) Convergent sequences of Legendre Padé approximants to the real and imaginary part of the scattering amplitudes. **(81a:81030)**
Cornille, Henri Solutions of the nonlinear 3-wave equations in three spatial dimensions. **(81d:35069)**
Dacev, Asen B. Classical and quantum treatments of the diffraction problem in the case of nonhomogeneous media. I. The stationary problem. (Russian summary) **(81k:78020a)**
Classical and quantum treatments of the diffraction problem in the case of nonhomogeneous media. II. The nonstationary problem. **(81k:78020b)**
Dickinson, A. S. (*with* Richards, D.) Scattering of state-selected molecules in the sudden approximation. **(81h:81169)**
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Eckardt, Klaus-Jürgen Scattering theory for the Klein-Gordon equation. **(81m:35112)**
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Grigor'eva, N. S. *See* **Buldyrev, V. S., (81d:34025)**

Guseinov, G. Š. The scattering problem for an infinite Jacobi matrix. (Russian. Armenian and English summaries) **(81k:47013)**

Ivanov, C. I. Quantum statistics of reaction-diffusion systems. **(81f:82012)**

Karpman, V. I. Soliton evolution in the presence of perturbation. **(81f:35103)**

Korotjaev, E. L. On the spectrum of the monodromy operator of the Schrödinger operator with a potential which is periodic with respect to time. (Russian) **(81k:35039)**

Kulli, P. P. Generating operators for integrable nonlinear evolution equations. (Russian) **(81k:35148)**

Lee, Soo-Y. The inhomogeneous Airy functions, Gi(z) and Hi(z). **(81b:33015)**

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Li, C. H. (*with* Tong, S. Y.; Mills, D. L.) Large-angle inelastic electron scattering from adsorbate vibrations: basic theory. **(81a:82043)**

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Roy Chowdhury, A. (*with* Roy, T.) Prolongation structure and inverse scattering formalism for super symmetric sine-Gordon equation in ordinary space time variable. **(81d:35003)**

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Sasaki, R. (*with* Bullough, R. K.) Geometry of the AKNS-ZS inverse scattering scheme. **(81h:58008)**

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The effective potential and the bound states for a class of two-dimensional gauge theories. **81d:81098**

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Baran, S. A. The unstability of the strong-gravity solution. (Italian and Russian summaries) **81e:81120**

Barbari, S. (*with* Kalman, C. S.) $SU_{1,3}$ as a dynamical group for hadron scattering states. **81e:81121**

Bardeen, William A. Transverse lattice theory of quantum chromodynamics. **81f:81076**

Baulieu, L. (*with* Floratos, E. G.; Kounnas, C.) Parton model interpretation of the cut vertex formalism. **81c:81054**

Bender, Iring (*with* Gromes, Dieter; Rothe, Heinz J.) Solutions of Yang-Mills equations with static q-number sources in a semiclassical treatment. **81d:81099**

Bertlmann, R. A. (*with* Martin, André) Inequalities on heavy quark-antiquark systems. **81e:81122**

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Ruegg, H. Symmetry breaking patterns for unitary and orthogonal groups. (*See* **81j:81066**)

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Shelman, Jon Target mass corrections in the QCD parton model. **81h:81138**

Šifman, M. A. (*with* Vaĭnshteĭn, A. I.; Zaharov, V. I.) Can confinement ensure natural CP invariance of strong interactions? **81g:81097**
Wilson loop in vacuum fields. **81i:81095**
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Suura, H. (*with* Wilson, Weldon James; Young, Bing Lin) Relativistic wave equation and heavy quarkonium spectra. **81g:81098**
Svetitsky, Benjamin (*with* Drell, Sidney D.; Quinn, Helen R.; Weinstein, Marvin) Dynamical breaking of chiral symmetry in lattice gauge theories. **81e:81127**
Tataru-Mihai, P. A model-independent sufficient condition for static quark confinement. (Italian and Russian summaries) **81h:81139**
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Tellez-Arenas, A. (*with* Fronteau, Jean; Santilli, Ruggero Maria) Closed systems with nonconservative internal forces. **81g:81099**
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di Vecchia, P. (*with* Veneziano, G.) Chiral dynamics in the large N limit. **81h:81141**
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Wallace, D. J. Strong interaction models in 6–ε dimensions. **81c:81063**
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(Alonso, J. L.) *See* **Quantum chromodynamics, (81i:81004)**
Arodź, Henryk On fermionic Green's function and fermionic determinant in massless QCD_2. **(81b:81023)**
Aurilia, A. (*with* Nicolai, H.; Townsend, P. K.) Hidden constants: the θ parameter of QCD and the cosmological constant of $N=8$ supergravity. **(81k:83044)**
Baker, Marshall *See* **Kim, S. K., (81i:81059)**
Banks, T. (*with* Casher, A.) Constant classical solutions of the SU(N) Yang-Mills field equations for $N=\infty$. **(81k:81053)**
Barducci, A. (*with* Lusanna, L.) A pole-dipole relativistic string model. (Italian and Russian summaries) **(81a:81138)**
(Basdevant, Jean-Louis) *See* **Hadron structure and lepton-hadron interactions, (81a:81002)**
(Cabibbo, Nicola) *See* **Hadronic matter at extreme energy density, (81e:81006)**
Casher, A. *See* **Banks, T., (81k:81053)**
Danilov, G. S. (*with* Djatlov, I. T.; Petrov, V. Ju.) Evolution operator and quark structure of states in two-dimensional massless electrodynamics. **(81i:81133)**
Davies, E. B. Asymptotic completeness for a quark model of meson scattering. **(81h:81122)**
Deans, W. S. Strings in gauge theories. **(81k:81090)**
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Djatlov, I. T. *See* **Danilov, G. S.; et al., (81i:81133)**
Everett, Allen E. Confinement and the consistency of Yang-Mills theory. **(81b:81016)**
(Gastmans, Raymond) *See* **Hadron structure and lepton-hadron interactions, (81a:81002)**
Gervais, J.-L. Solitons and instantons in quantum field theory. (French summary) **(81f:81078)**
Grosse, H. (*with* Martin, André) Exact results on potential models for quarkonium systems. **(81e:81027)**
Guth, Alan H. Existence proof of a nonconfining phase in four-dimensional U(1) lattice gauge theory. **(81f:81057)**
Hirano, Masanobu (*with* Ikeda, Yōko) A linear potential for quark-antiquark pair system. **(81d:81014)**
Ichinose, Ikuo (*with* Sera, Katsushi) Canonical quantization of gauge fields in the axial gauge with indefinite metric: basic formulation for perturbation calculation. **(81k:81096)**
Ikeda, Yōko *See* **Hirano, Masanobu, (81d:81014)**
Itzykson, C. (*with* Zuber, J. B.) The planar approximation. II. **(81a:81068)**
Kaptanoğlu, Sinan Weakly canonical transformations and the path integral quantization. **(81m:81026)**
Kim, S. K. (*with* Baker, Marshall) Consequences of gauge invariance for the interacting vertices in nonabelian gauge theories. **(81i:81059)**
Kinsella, J. Analytic properties of the crossing matrix between kinematic-singularity-free helicity amplitudes for pion production. **(81e:81117)**
Kogut, John B. An introduction to lattice gauge theory and spin systems. **(81i:81060)**
Korthals-Altes, C. P. Inequalities for order and disorder parameters in SU(N) gauge theories. **(81f:81060)**
Ktorides, Christos N. (*with* Myung, Hyo Chul; Santilli, Ruggero Maria) Elaboration of the recently proposed test of Pauli's principle under strong interactions. **(81i:81044)**
Kugo, Taichiro (*with* Ojima, Izumi) Local covariant operator formalism of nonabelian gauge theories and quark confinement problem. **(81b:81019)**
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Lu, Chih Yuan *See* **Luttinger, J. M., (81k:81030)**
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Asorey, M. (*with* Boya, L. J.) Electromagnetism without monopoles is possible in nontrivial U(1)-fibre bundles. **81m:81068**
Baker, W. M. (*with* Davis, W. R.) On duality invariance in simple gauge theories including electromagnetic-type fields with sources. (Italian and Russian summaries) **81c:81064**
Barut, Asim Orhan de Rham currents, extended singularities of fields and magnetic monopoles. **81k:81093**
Electromagnetic interactions beyond quantum electrodynamics. (*See* **81i:81002**)
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Recent advances in group theory and their application to spectroscopy ★Recent advances in group theory and their application to spectroscopy. **(81a:81006)**
Spectroscopy ★Recent advances in group theory and their application to spectroscopy. **(81a:81006)**

81G45 Other atomic physics

Ahlrichs, R. *See* **Hoffmann-Ostenhof, M.; et al., 81i:81114**
Bachelier, A. *See* **Luc-Koenig, E., 81i:81115a** *and* **Luc-Koenig, E., 81i:81115b**
Brandi, H. S. (*with* de Matos, M. M.; Ferreira, R.) Fractional occupation in the Hartree-Fock method. **81f:81090**
Cohen, Maurice An intrinsic property of the Hartree-Fock model? **81i:81113**
Fano, U. Connection between configuration-mixing and quantum-defect treatments. \ **81e:81155**
Ferreira, R. *See* **Brandi, H. S.; et al., 81f:81090**
Grant, I. P. (*with* McKenzie, B. J.) The transverse electron-electron interaction in atomic structure calculations. **81e:81156**
Henley, E. M. *See* **Wilets, L.; et al., 81e:81161**
Hill, Robert Nyden Proof that the H^- ion has only one bound state: a review, a new result, and some related unsolved problems. **81h:81164**
Hirschfelder, Joseph O. *See* **Yang, Kuo Ho, 81g:81111**
Hoffmann-Ostenhof, M. (*with* Hoffmann-Ostenhof, T.; Ahlrichs, R.; Morgan, John III) On the exponential falloff of wavefunctions and electron densities. **81i:81114**
Hoffmann-Ostenhof, T. *See* **Hoffmann-Ostenhof, M.; et al., 81i:81114**
Jeziorski, Bogumil (*with* Schwalm, William A.; Szalewicz, Krzysztof) Analytic continuation in exchange perturbation theory. **81k:81111**
Jhanwar, B. L. (*with* Meath, William J.) Evaluation of the dipole polarizability for hydrogen-like atoms in arbitrary bound states. **81d:81119**
Johnson, W. R. *See* **Lee, C. M., 81h:81165**
Kumar, Sunil (*with* Mehta, C. L.) Theory of the interaction of a single-mode resonant radiation field with *N* two-level atoms. **81a:81110**
Laloë, F. *See* **Pinard, M., 81i:81116a** *and* **Pinard, M., 81i:81116b**
Lee, C. M. (*with* Johnson, W. R.) Scattering and spectroscopy: relativistic multichannel quantum-defect theory. **81h:81165**
Levy, Mel *See* **Tal, Yoram, 81m:81079**
Lightman, Alan P. (*with* Rybicki, George B.) Inverse Compton reflection: the steady-state theory. **81a:81111**
Luc-Koenig, E. (*with* Bachelier, A.) Systematic theoretical study of the Stark spectrum of atomic hydrogen. I. Density of continuum states. **81i:81115a**
(*with* Bachelier, A.) Systematic theoretical study of the Stark spectrum of atomic hydrogen. II. Density of oscillator strengths. Comparison with experimental absorption spectra in solid-state and atomic physics. **81i:81115b**
Macías, A. (*with* Riera, A.) The Stark effect: relationship between perturbation and variation treatments. **81a:81112**
Mårtensson, A.-M. *See* **Wilets, L.; et al., 81e:81161**
de Matos, M. M. *See* **Brandi, H. S.; et al., 81f:81090**
McKenzie, B. J. *See* **Grant, I. P., 81e:81156**
Meath, William J. *See* **Jhanwar, B. L., 81d:81119**
Mehta, C. L. *See* **Kumar, Sunil, 81a:81110**
Morgan, John D., III *See* **Hoffmann-Ostenhof, M.; et al., 81i:81114**
Nienhuis, G. (*with* Schuller, F.) Collisional broadening of saturated resonance fluorescence spectra by two-state atoms irradiated by monochromatic. **81m:81078a**
Collisional broadening of resonance fluorescence with excitation by intense radiation of finite bandwidth. **81m:81078b**
Ong, Warren (*with* Russek, Arnold) Simple asymptotic wave function for a continuum Dirac electron. **81e:81157**
Pinard, M. (*with* Laloë, F.) The role of the Pauli principle in spin exchange collisions. (French summary) **81i:81116a**
(*with* Laloë, F.) The role of the Pauli principle in metastability exchange collisions. (French summary) **81i:81116b**
Rañada, Antonio F. (*with* Usón, Juan M.) Localized solutions of a charged nonlinear spinor field in a Coulomb-like potential. **81e:81158**
Riera, A. *See* **Macías, A., 81a:81112**
Russek, Arnold *See* **Ong, Warren, 81e:81157**
Rybicki, George B. *See* **Lightman, Alan P., 81a:81111**
Schuller, F. *See* **Nienhuis, G., 81m:81078a**
Schwalm, William A. *See* **Jeziorski, Bogumil; et al., 81k:81111**
Swain, S. Generalised multiphoton rate equations. **81e:81159**
Szalewicz, Krzysztof *See* **Jeziorski, Bogumil; et al., 81k:81111**
Szasz, Levente *Xα* method with pseudopotentials. **81e:81160**
Tal, Yoram (*with* Levy, Mel) Expectation values of atoms and ions: the Thomas-Fermi limit. **81m:81079**
Usón, Juan M. *See* **Rañada, Antonio F., 81e:81158**
Wilets, L. (*with* Henley, E. M.; Mårtensson, A.-M.) A variational approach to two-body correlations in atoms. **81e:81161**
Yang, Kuo Ho (*with* Hirschfelder, Joseph O.) Interaction of molecules with electromagnetic fields. I. Classical particles and fields. **81g:81111**

secondary classifications:

Barthelat, J. C. (*with* Pélissier, M.; Durand, Ph.) Analytical relativistic self-consistent-field calculations for atoms. **(81g:81008)**
Brewer, Richard G. *See* **Schenzle, Axel; et al., (81d:81133)**
Deloff, A. (*with* Law, J.) Sturmian expansion method for bound state problems. **(81b:81011)**
Desgroland, P. (*with* Glöckle, W.; Le Tourneux, J.) On the computation of matrix elements between arbitrary single-particle wave functions. **(81f:81034)**
Durand, Ph. *See* **Barthelat, J. C.; et al., (81g:81008)**
Flutak, J. (*with* Van Kranendonk, J.) The effect of collisions on resonance fluorescence and Rayleigh scattering at high intensities. **(81h:81190)**
Friedland, Shmuel *See* **Moiseyev, Nimrod, (81g:81013)**
Georges, A. T. Resonance fluorescence in Markovian stochastic fields. **(81k:81118)**
Glöckle, W. *See* **Desgroland, P.; et al., (81f:81034)**
Grotch, Howard Lamb shift in nonrelativistic quantum electrodynamics. **(81k:81125)**
Kalamboukis, T. Z. A method for calculating the extreme eigensolution of a real symmetric matrix of high order. **(81f:65036)**
Law, J. *See* **Deloff, A., (81b:81011)**
Le Tourneux, J. *See* **Desgroland, P.; et al., (81f:81034)**
Ley Koo, E. (*with* Rubinstein, Sergio) The hydrogen atom inside boxes with paraboloidal surfaces. **(81e:81029)**
Moiseyev, Nimrod (*with* Friedland, Shmuel) Association of resonance states with the incomplete spectrum of finite complex-scaled Hamiltonian matrices. **(81g:81013)**
Patil, S. H. *T*-matrix analysis of one-dimensional weakly coupled bound states. **(81k:81084)**
Pélissier, M. *See* **Barthelat, J. C.; et al., (81g:81008)**
Rubinstein, Sergio *See* **Ley Koo, E., (81e:81029)**
Schenzle, Axel (*with* Wong, N. C.; Brewer, Richard G.) Theorem on coherent transients. **(81d:81133)**
Van Kranendonk, J. *See* **Flutak, J., (81h:81190)**
Wong, N. C. *See* **Schenzle, Axel; et al., (81d:81133)**
Yeh, J. J. *See* **Zubairy, M. S., (81a:81132)**
Zubairy, M. S. (*with* Yeh, J. J.) Photon statistics in multiphoton absorption and emission processes. **(81a:81132)**

81G50 Applications of group theory to molecular physics

Amar, François *See* **Kellman, Michael E.; et al., 81h:81166**
Bauder, A. *See* **Hollenstein, H.; et al., 81a:81114**
Berry, R. Stephen *See* **Kellman, Michael E.; et al., 81h:81166**
Bunker, P. R. Symmetry in $(H_2)_2$, $(D_2)_2$, $(HD)_2$, and H_2-D_2 van der Waals complexes. (French summary) **81c:81076**
Donini, John C. Recent advances in group theory: a chemist's view. **81c:81077**
Dress, Andreas W. M. Some suggestions concerning a geometric definition of the symmetry group of nonrigid molecules. **81c:81078**
The chirality algebra: some comments concerning mathematical aspects of the Ruch/Schönhofer chirality theory. **81c:81079**
Engel, Peter Zur Interpretation der Pattersonsynthese. (English summary) **81a:81113**
Frame, J. Sutherland Properties of double cosets with applications to theoretical chemistry. **81e:81162**
Günthard, Hs. H. *See* **Hollenstein, H.; et al., 81a:81114**
Hendeković, Josip *See* **Pavlović, Milica, 81k:81113**
Hollenstein, H. (*with* Bauder, A.; Günthard, Hs. H.) Sum of states, isometric group and symmetry number of nonrigid molecules. **81a:81114**
Kellman, Michael E. Correlation diagram for rigid *XYX* and nonrigid three-body systems. **81a:81115**
(*with* Amar, François; Berry, R. Stephen) Correlation diagrams for rigid and nonrigid three-body systems. **81h:81166**
Kerber, Adalbert Counting isomers and such. **81c:81080**
Kibler, Maurice R. Finite symmetry adaptation in spectroscopy. **81c:81081**
König, E. (*with* Kremer, S.) Tensor algebra and computational methods for intermediate and strong fields. **81c:81082**
Kovrikov, A. B. *See* **Ljudčik, A. M., 81j:81071**
Kremer, S. *See* **König, E., 81c:81082**
Kutzelnigg, Werner The "primitive" wave function in the theory of intermolecular interactions. **81e:81163**
Lathouwers, Luc On body-fixed frames and angular momentum projection operators. **81e:81164**
Ljudčik, A. M. (*with* Kovrikov, A. B.) Optimization of the calculation of symmetry adapted matrix elements in the Hartree-Fok-Roothaan method. (Russian. English summary) **81j:81071**
Louck, J. D. Relationship between the feasible group and the point group of a rigid molecule. **81c:81083**
Lulek, B. Coupling coefficients for cubic groups. III. The double tetrahedral group. **81b:81032**
Marić, Z. (*with* Popović-Božić, M.) Coefficients of fractional parentage for the states of

an arbitrary number of $j = 1$ bosons. **81h:81167**

Mogilevskiĭ, O. A. (*with* Vukajlović, F. R.) Asymptotic form of the electron repulsion matrix elements for hydrogen molecules in the adiabatic representation. **81e:81165**

Novak, Frank A. (*with* Rice, Stuart A.) The influence of rotational motion on intersystem crossing in isolated molecules. **81k:81112**

Ozaki, Mase-aki Group theoretical structure of a solution of the unrestricted Hartree-Fock equation in molecular systems with a spatial point symmetry. **81a:81116**

Pavlović, Milica (*with* Hendeković, Josip) Complex configuration mixing method. **81k:81113**

Pooler, D. R. Continuous group invariances of linear Jahn-Teller systems. **81f:81091**

Popović-Božić, M. *See* **Marić, Z., 81h:81167**

Rice, Stuart A. *See* **Novak, Frank A., 81k:81112**

Schaeffer, Richard Semi-classical approximation for heavy ions. (*See* **81b:81030**)

Scott, David K. The current experimental situation in heavy-ion reactions. (*See* **81b:81030**)

Seligman, Thomas H. Double cosets and the evaluation of matrix elements. **81e:81166**

Steele, William A. Symmetry constraints on the configurational properties of nonlinear molecules. Tetrahedra. **81a:81117**

Vukajlović, F. R. *See* **Mogilevskiĭ, O. A., 81e:81165**

secondary classifications:

Anderson, James B. Quantum chemistry by random walk: higher accuracy. **(81i:81026)**

Balasubramanian, K. The symmetry groups of nonrigid molecules as generalized wreath products and their representations. **(81f:20016)**

(Doulni, John C.) *See* **Recent advances in group theory and their application to spectroscopy, (81a:81006)**

Fliter, Eckhard (*with* Steinborn, E. Otto) A matrix representation of the translation operator with respect to a basis set of exponentially declining functions. **(81m:33006)**

Häuselbarth, W. (*with* Ruch, Ernst; Klein, D. J.; Seligman, Thomas H.) Bilateral classes: a new class concept of group theory. **(81b:20031)**

Klein, D. J. *See* **Häuselbarth, W.; et al., (81b:20031)**

Rettrup, S. (*with* Sarma, C. R.) A programmable procedure for generating many-particle states. **(81k:81099)**

Ruch, Ernst *See* **Häuselbarth, W.; et al., (81b:20031)**

Sarma, C. R. *See* **Rettrup, S., (81k:81099)**

Schulten, Klaus *See* **Tavan, Paul, (81h:81041)**

Seligman, Thomas H. *See* **Häuselbarth, W.; et al., (81b:20031)**

Steinborn, E. Otto *See* **Fliter, Eckhard, (81m:33006)**

Tavan, Paul (*with* Schulten, Klaus) An efficient approach to CI: general matrix element formulas for spin-coupled particle-hole excitations. **(81h:81041)**

Antigonish, N.S. ★Recent advances in group theory and their application to spectroscopy. **(81a:81006)**

Group theory ★Recent advances in group theory and their application to spectroscopy. **(81a:81006)**

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Recent Advances in Group Theory and their Application to Spectroscopy ★Recent advances in group theory and their application to spectroscopy. **(81a:81006)**

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Spectroscopy ★Recent advances in group theory and their application to spectroscopy. **(81a:81006)**

81G55 Other molecular physics

Antolović, Danko (*with* Delhalle, Joseph) Multipole and overlap integrals over reduced Bessel functions in molecular quantum mechanics. **81d:81120**

Aoyama, T. (*with* Yamakawa, H.; Matsuoka, O.) Relativistic self-consistent-field methods for molecules. II. A single-determinant Dirac-Fock self-consistent-field method for closed-shell polyatomic molecules. **81h:81173b**

See also **Matsuoka, O.; et al., 81h:81173a**

Barg, G.-D. (*with* Drolshagen, G.) Reactive and inelastic sudden rotational approximation in the body-fixed frame. **81a:81118**

Bendazzoli, G. L. (*with* Evangelisti, S.; Fano, G.; Ortolani, F.) A variational method for second-order properties in atoms and molecules. (Italian and Russian summaries) **81e:81167**

Bowman, Joel M. *See* **Tobin, Frank L., 81a:81124**

Brooks, Bernard R. (*with* Laidig, William D.; Saxe, Paul; Goddard, John D.; Yamaguchi, Yukio; Schaefer, Henry F., III) Analytic gradients from correlated wave functions via the two-particle density matrix and the unitary group approach. **81a:81119**

Brown, Craig W. Shortcomings of the Hellmann-Feynman theorem. **81a:81120**

Bruch, L. W. (*with* Osawa, T.) Perturbation theory of interaction dipoles. **81e:81168**

Butyrskaja, E. V. *See* **Jazykova, S. M., 81h:81171**

Chang, B. (*with* Eno, L.; Rabitz, Herschel) An improved phase shift approach to the energy correction of the infinite order sudden approximation. **81e:81169**

Datta, Sambhu N. Variational stability in Dirac-Hartree-Fock theory. **81i:81117**

Davies, E. B. Metastable states of molecules. **81k:81114**

Davydov, A. S. Elementary excitations in molecular systems described by nonlinear equations. (Russian) **81a:81121**

Deguchi, Kisaburo (*with* Nishikawa, Kiyoshi) Extension of the complex-coordinate method to molecular electronic resonances in the adiabatic approximation. I, II. **81h:81168**

Delhalle, Joseph *See* **Antolović, Danko, 81d:81120**

Dickinson, A. S. (*with* Richards, D.) Scattering of state-selected molecules in the sudden approximation. **81h:81169**

Drolshagen, G. *See* **Barg, G.-D., 81a:81118**

Druger, S. D. On the relation between random coupling and sequential intramolecular dynamics. **81h:81170**

Eno, L. *See* **Chang, B.; et al., 81e:81169**

Evangelisti, S. *See* **Bendazzoli, G. L.; et al., 81e:81167**

Fano, G. *See* **Bendazzoli, G. L.; et al., 81e:81167**

Fleurov, V. N. *See* **Makšancev, B. I., 81f:81092**

Gianturco, Franco A. ★The transfer of molecular energies by collision: recent quantum treatments. **81c:81084**

Goddard, John D. *See* **Brooks, Bernard R.; et al., 81a:81119**

Hase, William L. *See* **Wolf, Ralph J., 81j:81072**

Jazykova, S. M. (*with* Butyrskaja, E. V.) Mathematical justification of the r-centroid method in diatomic molecules. **81h:81171**

Krishnan, R. (*with* Schlegel, H. B.; Pople, J. A.) Derivative studies in configuration-interaction theory. **81e:81170**

Laidig, William D. *See* **Brooks, Bernard R.; et al., 81a:81119**

Lee, Hai Woong (*with* Scully, Marlan O.) A new approach to molecular collisions: statistical quasiclassical method. **81h:81172**

Lin, S. H. Theory of vibrational relaxation in isolated molecules. **81a:81122**

Makšancev, B. I. (*with* Fleurov, V. N.) Radiationless transitions in systems with quasidiscrete spectrum. **81f:81092**

Malli, G. *See* **Matsuoka, O.; et al., 81h:81173a**

Mark, Franz (*with* Rosicky, Franz) Analytical relativistic Hartree-Fock equations within scalar basis sets. **81i:81118**

Matsuoka, O. (*with* Suzuki, N.; Aoyama, T.; Malli, G.) Relativistic self-consistent-field methods for molecules. I. Dirac-Fock multiconfiguration self-consistent-field theory for molecules and a single-determinant Dirac-Fock self-consistent-field method for closed-shell linear molecules. **81h:81173a**

See also **Aoyama, T.; et al., 81h:81173b**

Mead, C. Alden The molecular Aharonov-Bohm effect in bound states. **81m:81080a**

Electronic spin-orbit interaction and the molecular Aharonov-Bohm effect. **81m:81080b**

Meyer, Wilfried *See* **Werner, Hans-Joachim, 81m:81081**

Mogilevskiĭ, O. A. (*with* Ponomarev, L. I.; Vukajlović, F. R.) The hydrogen molecule in the adiabatic representation. **81e:81171**

See also **Vukajlović, F. R., 81e:81172**

Morokov, Ju. N. Convergence of an iteration process of self-consistency in approximate methods of quantum chemistry. (Russian) **81a:81123**

Nishikawa, Kiyoshi *See* **Deguchi, Kisaburo, 81h:81168**

Ortolani, F. *See* **Bendazzoli, G. L.; et al., 81e:81167**

Osawa, T. *See* **Bruch, L. W., 81e:81168**

Pines, A. *See* **Warren, W. S.; et al., 81h:81175**

Ponomarev, L. I. *See* **Mogilevskiĭ, O. A.; et al., 81e:81171**

Pople, J. A. *See* **Krishnan, R.; et al., 81e:81170**

Rabitz, Herschel *See* **Chang, B.; et al., 81e:81169**

Richards, D. *See* **Dickinson, A. S., 81h:81169**

Roos, Björn (*with* Taylor, Peter R.; Siegbahn, Per E. M.) A complete active space SCF method (CASSCF) using a density matrix formulated super-CI approach. **81d:81121**

Rosicky, Franz *See* **Mark, Franz, 81i:81118**

Rothwell, W. P. *See* **Suwelack, D.; et al., 81h:81174**

Saxe, Paul *See* **Brooks, Bernard R.; et al., 81a:81119**

Schaefer, Henry F., III *See* **Brooks, Bernard R.; et al., 81a:81119**

Schlegel, H. B. *See* **Krishnan, R.; et al., 81e:81170**

Schmutz, M. Jahn-Teller systems as displaced para-Bose oscillators. **81d:81122**

Scully, Marlan O. *See* **Lee, Hai Woong, 81h:81172**

Siegbahn, Per E. M. *See* **Roos, Björn; et al., 81d:81121**

Suwelack, D. (*with* Rothwell, W. P.; Waugh, J. S.) Slow molecular motion detected in the NMR spectra of rotating solids. **81h:81174**

Suzuki, N. *See* **Matsuoka, O.; et al., 81h:81173a**

Taylor, Peter R. *See* **Roos, Björn; et al., 81d:81121**

Tobin, Frank L. (*with* Bowman, Joel M.) An SCF-state interaction method for coupled oscillator systems. **81a:81124**

Valone, Steven M. Consequences of extending 1 matrix energy functionals from pure-state representable to all ensemble representable 1 matrices. **81f:81093**

Vukajlović, F. R. (*with* Mogilevskiĭ, O. A.) Electron repulsion potentials of diatomic molecules in the adiabatic basis. **81e:81172**

See also **Mogilevskiĭ, O. A.; et al., 81e:81171**

Warren, W. S. (*with* Weitekamp, D. P.; Pines, A.) Theory of selective excitation of multiple-quantum transitions. **81h:81175**

Waugh, J. S. *See* **Suwelack, D.; et al., 81h:81174**

Weitekamp, D. P. *See* **Warren, W. S.; et al., 81h:81175**

Werner, Hans-Joachim (*with* Meyer, Wilfried) A quadratically convergent multiconfiguration-self-consistent field method with simultaneous optimization of orbitals and CI coefficients. **81m:81081**

Wolf, Ralph J. (*with* Hase, William L.) Quasiperiodic trajectories for a multidimensional anharmonic classical Hamiltonian excited above the unimolecular threshold. **81j:81072**

Yamaguchi, Yukio *See* **Brooks, Bernard R.; et al., 81a:81119**

Yamakawa, H. *See* **Aoyama, T.; et al., 81h:81173b**

secondary classifications:

Askar, Attila *See* **Augustin, Stuart D.; et al., (81d:81010)**

Augustin, Stuart D. (*with* Demiralp, Metin; Rabitz, Herschel; Askar, Attila) Action-angle variables for the quantum three-particle system. **(81d:81010)**

Brink, Lars (*with* Howe, Paul) The $N = 8$ supergravity in superspace. **(81c:83027)**

Demiralp, Metin *See* **Augustin, Stuart D.; et al., (81d:81010)**

Doll, J. D. A unified theory of dissociation. **(81g:80010)**

Graovac, Ante (*with* Gutman, Ivan) The determinant of the adjacency matrix of a molecular graph. **(81b:05078)**

Gutman, Ivan Note on a topological property of the HOMO-LUMO separation. **(81h:92033)**

See also **Graovac, Ante, (81b:05078)**

Hirschfelder, Joseph O. *See* **Yang, Kuo Ho, (81j:81030)**

Howe, Paul *See* **Brink, Lars, (81c:83027)**

King, Frederick W. (*with* Rothstein, Stuart M.) Local scaled Schrödinger relations and the virial theorem. **(81c:81009)**

Rabitz, Herschel *See* **Augustin, Stuart D.; et al., (81d:81010)**

Rothstein, Stuart M. *See* **King, Frederick W., (81c:81009)**

Yang, Kuo Ho (*with* Hirschfelder, Joseph O.) Generalizations of classical Poisson brackets to include spin. **(81j:81030)**

81G99 None of the above, but in this section

Arnowitt, R. *See* **Nath, Pran, 81i:81121**

Bang, J. M. (*with* Eršov, S. N.; Gareev, F. A.) A new type of real Weinberg functions. **81a:81125**

Basilevskiĭ, M. V. (*with* Rjaboi, V. M.) A new method of the investigation of quantum dynamics of the light atom exchange reactions. **81i:81119**

Eršov, S. N. *See* **Bang, J. M.; et al., 81a:81125**

Fishbane, Paul M. (*with* Namyslowski, J. M.) Noninstantaneous $O(v/c)$ relativistic effects in bound states and a covariant Schrödinger equation. **81g:81112**

Gareev, F. A. *See* **Bang, J. M.; et al., 81a:81125**

Greenspan, Donald Discrete modeling in the microcosm and in the macrocosm. **81a:81126**

Hüfner, Jörg Reactions between heavy ions at high energy. (*See* **81b:81030**)

Hughston, Lane Palmer ★Twistors and particles. **81e:81173**

James, Frederick (*with* Roos, Matts) Errors on ratios of small numbers of events. **81h:81176**

Jena, P. K. (*with* Naik, P. C.; Pradhan, T.) Photon as the zero-mass limit of DKP field. **81i:81120**

Moniz, E. J. Pion-nucleus scattering in the isobar formalism. (*See* **81b:81030**)

Naik, P. C. *See* **Jena, P. K.; et al., 81i:81120**

Namyslowski, J. M. *See* **Fishbane, Paul M., 81g:81112**

Nath, Pran (*with* Arnowitt, R.) Quantum effects on the vacuum symmetries of gauge supersymmetry. **81i:81121**

Negele, J. W. Nuclear dynamics: the time-dependent mean-field approximation and beyond. (*See* **81b:81030**)

Pradhan, T. *See* **Jena, P. K.; et al., 81i:81120**

Rjaboi, V. M. *See* **Basilevskiĭ, M. V., 81i:81119**

Roos, Matts *See* **James, Frederick, 81h:81176**

Schwinger, Julian Introduction and selected topics in source theory. **81h:81177**

Stepišnik, Janez Theory of coherent two-photon NMR: standard-basis operators and coherent averaging. **81d:81123**

Weidenmüller, Hans A. Transport theory of deeply inelastic heavy-ion reactions. (*See* **81b:81030**)

secondary classifications:

Butler, Philip H. Properties and application of point group coupling coefficients. **(81g:22026)**

Cavalleri, G. Atoms with point particles in general relativity. (Italian and Russian summaries) **(81e:83037)**

Cissé, L. Some general conservation formulae in a nonlinear functional theory of particles. (Italian and Russian summaries) **(81d:81034)**

Cohen, R. H. *See* **Lichtenberg, A. J.; et al., (81m:78015)**

(Einstein, Albert) *See* **Yang, Chen Ning, (81c:81001)**

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81H20 Solid state band theory

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Zoller, P. *See* **Leubner, C., 81h:81192**

Zubairy, M. S. (*with* Yeh, J. J.) Photon statistics in multiphoton absorption and emission processes. **81a:81132**

secondary classifications:

Bali, L. M. *See* **Kalia, S.; et al., (81d:81024)**

Becker, W. Quantum theory of a free electron laser for strong fields. **(81d:81103)**

Bui, T. D. (*with* Bui, T. R.) Solving stiff differential equations for simulation: applications to the simulation of a new molecular laser system. **(81m:65112)**

Bui, T. R. *See* **Bui, T. D., (81m:65112)**

Cattaneo, U. (*with* Wreszinski, W.) Trotter limits of Lie algebra representations and coherent states. **(81a:17005)**

Comi, M. On the photon position observable. (Italian and Russian summaries) **(81e:81013)**

Emch, Gérard G. (*with* Sinha, Kalyan B.) Weak quantization in a nonperturbative model. **(81g:81015)**

Fannes, M. (*with* Spohn, Herbert; Verbeure, A.) Equilibrium states for mean field models. **(81a:82015)**

Gordov, E. P. (*with* Tvorogov, S. D.) Semiclassical method of representation in quantum electrodynamics. (Russian) **(81h:81201)**

Graham, Robert *See* **Yamada, Tomoji, (81h:58044)**

Grossmann, A. (*with* Tip, A.) Hydrogen atoms interacting with a quantised radiation mode. **(81i:81022)**

van Hemmen, J. Leo A note on the diagonalization of quadratic boson and fermion Hamiltonians. **(81j:82010)**

Kalia, S. (*with* Bali, L. M.; Roy, Sharmistha B.) On the Schrödinger equation for a perturbation problem. **(81d:81024)**

Knight, P. L. Double-pole decay of Rabi oscillations. **(81i:81087)**

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Lugiato, L. A. (*with* Milani, M.) On the quantum-mechanical description of Josephson junctions. (Italian and Russian summaries) **(81e:81175)**

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Milani, M. *See* **Lugiato, L. A., (81e:81175)**

Nienhuis, G. (*with* Schuller, F.) Collisional broadening of saturated resonance fluorescence spectra by two-state atoms irradiated by monochromatic. **(81m:81078a)**

Collisional broadening of resonance fluorescence with excitation by intense radiation of finite bandwidth. **(81m:81078b)**

Oudar, J.-L. (*with* Shen, Y. R.) Nonlinear spectroscopy by multiresonant four-wave mixing. **(81g:78007)**

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Poplavskiĭ, R. P. Maxwell demon and the correspondence between information and entropy. **(81d:80003)**

Puri, R. R. (*with* Lawande, S. V.) A master equation for spontaneous emission from a system of harmonic oscillators. **(81h:82030)**

(*with* Lawande, S. V.) Exact thermodynamic behaviour of a collective atomic system in an external field. **(81d:82016)**

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Šavrackiĭ, S. H. *See* **Pelinovskiĭ, E. N., (81m:78018)**

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Spohn, Herbert *See* **Fannes, M.; et al., (81a:82015)**

Stepničnik, Janez Theory of coherent two-photon NMR: standard-basis operators and coherent averaging. **(81d:81123)**

Swain, S. Generalised multiphoton rate equations. **(81e:81159)**

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Tvorogov, S. D. *See* **Gordov, E. P., (81h:81201)**

Verbeure, A. *See* **Fannes, M.; et al., (81a:82015)**

Wreszinski, W. *See* **Cattaneo, U., (81a:17005)**

Yamada, Tomoji (*with* Graham, Robert) Chaos in a laser system under a modulated external field. **(81h:58044)**

81L05 Quantum electrodynamics

Alekseev, A. I. (*with* Arbuzov, B. A.; Rodionov, A. Ja.) The possibility of dynamical mass generation in finite quantum electrodynamics. (Russian. English summary) **81k:81124**

Arbuzov, B. A. *See* **Alekseev, A. I.; et al., 81k:81124**

Barut, Asim Orhan Nonlinear problems in classical and quantumelectrodynamics. **81f:81096**

Bechler, Adam Stability of the charged particle configuration of a nonlinear electromagnetic field. **81a:81133**

van den Berg, M. The Casimir effect in two dimensions. **81m:81094**

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Bialynicki-Birula, Iwo Phase representation of intense photon beams and its applications. (*See* **81l:81002**)

Chalifour, J. L. *See* **Weingarten, Don, 81a:81137**

Clark, T. D. *See* **Widom, Allan, 81h:81206**

Clark, T. E. (*with* Piguet, O.; Sibold, K.) The gauge invariance of the supercurrent in supersymmetric QED. **81h:81200**

Claverie, P. (*with* Pesquera, L.; Soto, F.) Existence of a constant stationary solution for the hydrogen atom problem in stochastic electrodynamics. **81m:81095**

Coquereaux, R. Renormalization schemes in QED. **81e:81184**

Čudinovič, I. Ju. The two-point electron Green function in quantum electrodynamics. (Russian) **81c:81086**

Danilov, G. S. (*with* Djatlov, I. T.; Petrov, V. Ju.) Evolution operator and quark structure of states in two-dimensional massless electrodynamics. **81i:81133**

Djatlov, I. T. *See* **Danilov, G. S.; et al., 81i:81133**

Drummond, I. T. (*with* Hathrell, S. J.) QED vacuum polarization in a background gravitational field and its effect on the velocity of photons. **81e:81185**

Eberly, J. H. Unified view of spontaneous emission in several theories of radiation. (*See* **81l:81002**)

Ernst, V. *See* **Gessner, W., 81b:81037**

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Ford, L. H. Vacuum polarization in a nonsimply connected spacetime. **81a:81134**

Gambini, R. (*with* Salamó, S.; Trias, A.) Self-dual covariant Lagrangian formulation of electromagnetism with magnetic charges. **81f:81097**

Gessner, W. (*with* Ernst, V.) The rosette of rosettes of Hilbert spaces in the indefinite metric state space of the quantized Maxwell field. **81b:81037**

Gordov, E. P. (*with* Tvorogov, S. D.) Semiclassical method of representation in quantum electrodynamics. (Russian) **81h:81201**

Grotch, Howard (*with* Kazes, E.) Nonrelativistic calculation of the electron g factor. (*See* **81l:81002**)

(*with* Kazes, E.) Heisenberg equation of motion calculation of the electron

self-mass in nonrelativistic quantum electrodynamics. (*See* **81i:81002**)
Lamb shift in nonrelativistic quantum electrodynamics. **81k:81125**

Guha, Arunabha A combined WKB-variational method for compact quantum electrodynamics in (2+1) dimensions. **81h:81202**

Hatfield, S. J. *See* **Drummond, I. T., 81e:81185**

Kassandrov, V. V. (*with* Terleckiĭ, Ja. P.) Charged particles in the classical Maxwell-Dirac field model. (Russian) **81b:81038**

Kazes, E. *See* **Grotch, Howard,** (*See* **81i:81002**) *and* **Grotch, Howard,** (*See* **81i:81002**)

Klaus, Martin Nonregularity of the Coulomb potential in quantum electrodynamics. **81m:81096**

Kruglov, S. I. (*with* Stražev, V. I.) Larmor symmetry of the quantum theory of a massless vector field. (Russian. English summary) **81b:81039**

Leiter, Darryl Charge-field formulation of quantum electrodynamics (QEMED). **81f:81098**

Marshall, Trevor W. On the sums of a family of Kapteyn series. (French summary) **81f:81099**

Marx, Egon Quantum electrodynamics of one scalar particle. **81g:81117**

Matsumoto, Hideki (*with* Semenoff, G.; Umezawa, H.; Tachiki, M.) Quantum electrodynamics in solids. **81d:81136**

Meister, T. F. (*with* Felderhof, B. U.) Current density and electric and magnetic multipole-moment operators in quantum mechanics. **81d:81137**

Milton, Kimball A. Macroscopic quantum electrodynamics. (*See* **81i:81002**)
Semiclassical electron models: Casimir self-stress in dielectric and conducting balls. **81e:81186**

Nikiforov, A. I. Problems of an intense external field in quantum electrodynamics. (Russian) **81h:81203**

Pegg, D. T. Photoelectron antibunching and absorber theory. **81a:81136**

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Ritus, V. I. Quantum effects of the interaction of elementary particles with an intense electromagnetic field. (Russian) **81h:81204**

Rodionov, A. Ja. *See* **Alekseev, A. I.; et al., 81k:81124**

Rohrlich, F. Fundamental physical problems of quantum electrodynamics. (*See* **81i:81002**)

Salamó, S. *See* **Gambini, R.; et al., 81f:81097**

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Sharp, David H. A local gauge-invariant formulation of quantum electrodynamics. (*See* **81i:81002**)

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Širokov, M. I. Minimally nonlocal quantum electrodynamics without potentials for bound electrons. **81d:81138**

Škol'nikov, P. L. *See* **Stražev, V. I., 81e:81188**

Sotkov, G. M. (*with* Stojanov, D. C.) On the conformal invariance in quantum electrodynamics. **81h:81205**

Soto, F. *See* **Claverie, P.; et al., 81m:81095**

Stojanov, D. C. *See* **Sotkov, G. M., 81h:81205**

Stoneham, R. J. Vacuum polarization effects on Compton scattering by unmagnetized electrons in an ambient magnetic field. **81e:81187**

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(*with* Škol'nikov, P. L.) On two-potential formulation of electrodynamics with magnetic monopoles. (Russian. English summary) **81e:81188**
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Tachiki, M. *See* **Matsumoto, Hideki; et al., 81d:81136**

Terleckiĭ, Ja. P. *See* **Kassandrov, V. V., 81b:81038**

Trias, A. *See* **Gambini, R.; et al., 81f:81097**

Tvorogov, S. D. *See* **Gordov, E. P., 81h:81201**

Umezawa, H. *See* **Matsumoto, Hideki; et al., 81d:81136**

Weingarten, Don (*with* Challifour, J. L.) Continuum limit of QED_2 on a lattice. **81a:81137**

Widom, Allan (*with* Clark, T. D.) Quantum electrodynamic circuit interpretation of the thermal Nyquist noise theorem in the $\omega \gtrsim (k_B T/\hbar)$ limit. **81h:81206**
Quantum electrodynamics of a Josephson-junction capacitor. **81d:81139**

Woolley, R. G. Gauge invariant wave mechanics and the Power-Zienau-Woolley transformation. **81h:81207**

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Angelié, C. (*with* Deutsch, C.) Relativistic hydrogen atom in superstrong magnetic fields. **(81m:81008)**
(*with* Deutsch, C.) Semiclassical approach to the strongly magnetized hydrogen atom. **(81m:81009)**

Arthurs, A. M. On quantization of the electromagnetic field. **(81k:81092)**

(Barut, Asim Orhan) *See* **Foundations of radiation theory and quantum electrodynamics, (81i:81002)**

Bhartia, Prakash *See* **Valluri, Sree Ram, (81h:78017)**

Bocchieri, P. (*with* Loinger, A.; Siragusa, G.) The role of the electromagnetic potentials in quantum mechanics. The Marton experiment. (Italian summary) **(81e:81062)**

Buchmüller, W. (*with* Dietz, K.) Multiparticle bound states in QED. **(81d:81011)**

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Dietz, K. *See* **Buchmüller, W., (81d:81011)**

Epstein, S. T. The canonical momentum is measurable in any gauge. **(81m:78005)**

Fukuda, Takashi (*with* Kubo, Reijiro; Yokoyama, Kan-ichi) Possible situation for gauge independence of wave-function renormalization constants in gauge-field theories. **(81d:81075)**

Green, M. (*with* Veltman, M.) Weak and e.m. radiative corrections to low-energy processes. **(81h:81147)**

(Gregory, Bernard) *See* **Weisskopf, Victor F., (81e:81002)**

Guadagnini, E. Some remarks about the temporal gauge. (Italian and Russian summaries) **(81k:81074)**

Guerra, Francesco (*with* Loffredo, M. I.) Stochastic equations for the Maxwell field. **(81d:81076)**

Henneberger, Walter C. Some aspects of the Aharonov-Bohm effect. **(81j:81004)**

(van Hove, Léon) *See* **Weisskopf, Victor F., (81e:81002)**

Ito, Kelichi R. Construction of two-dimensional quantum electrodynamics. **(81h:81070)**
Absolute bound of the functional determinant in $(QED)_2$. **(81h:81071)**

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Siragusa, G. *See* **Bocchieri, P.; et al., (81e:81062)**

Stoneham, R. J. Vacuum polarization effects of Thomson scattering in a strong magnetic field. **(81e:82042)**

Valluri, Sree Ram (*with* Bhartia, Prakash) An analytical proof for the generation of higher harmonics due to the interaction of plane electromagnetic waves. (French summary) **(81h:78017)**

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Venturi, G. *See* **Righi, R., (81h:81146)**

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Radiation theory ★Foundations of radiation theory and quantum electrodynamics. **(81i:81002)**

81M05 Relativistic theory

Alvarez-Gaumé, Luis (*with* Freedman, Daniel Z.) Kähler geometry and the renormalization of supersymmetric σ-models. **81j:81076**

Atakišiev, N. M. (*with* Mir-Kasimov, R. M.; Nagiev, Š. M.) Quasipotential models of a relativistic oscillator. (Russian. English summary) **81h:81208**

Barducci, A. (*with* Lusanna, L.) A pole-dipole relativistic string model. (Italian and Russian summaries) **81a:81138**

Birrell, N. D. (*with* Taylor, John G.) Analysis of interacting quantum field theory in curved spacetime. **81j:81077**

Borgardt, O. O. (*with* Karpenko, D. Ja.) Operators of magnetic translation in relativistic theory. (Russian. English summary) **81h:81209**

Buchmüller, W. Quantum fluctuations and the variational approach to bound states. **81a:81139**

Bunch, T. S. Adiabatic regularisation for scalar fields with arbitrary coupling to the scalar curvature. **81j:81078**

Cufaro Petroni, N. (*with* Vigier, J.-P.) Markov process at the velocity of light: the Klein-Gordon statistic. **81g:81119**

Droz-Vincent, Ph. On multilocal quantum field theory. **81e:81189**

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Freedman, Daniel Z. *See* **Alvarez-Gaumé, Luis, 81j:81076**

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Green, P. Integrality of the Coulomb charge in the line space formalism. **81a:81140**

Greider, K. Relativistic quantum theory with correct conservation laws. **81d:81140**

Hájíček, Petr Observables for quantum fields on curved background. **81j:81079**

Hines, D. F. (*with* Frankel, N. E.) Relativistic charged Bose gas. **81i:81134**

Horowitz, Gary T. (*with* Wald, Robert M.) Quantum stress energy in nearly conformally flat spacetimes. **81a:81141**

Kamal, Arif Physical significance and properties of relativistic effective mass operator. **81h:81210**

Karmanov, V. A. Light-front wave function of a relativistic composite system in an explicitly solvable model. **81d:81141**

Karpenko, D. Ja. *See* **Borgardt, O. O., 81h:81209**

Lukierski, Jerzy Superconformal group and curved fermionic twistor space. **81a:81142**

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Mir-Kasimov, R. M. *See* **Atakišiev, N. M.; et al., 81h:81208**

Mur, V. D. (*with* Popov, V. S.) Quasiclassical approximation for the Dirac equation in strong fields. **81c:81088**

Nagiev, Š. M. *See* **Atakišiev, N. M.; et al., 81h:81208**

Namyslowski, J. M. (*with* Weber, H. J.) Bound states and scattering from bound states in the light-front field theory dynamics. **81e:81190**

Parker, Leonard One-electron atom in curved space-time. **81g:81120**

Patton, C. M. Zero rest mass fields and the Bargmann complex structure. **81a:81143**

Perjés, Zoltán Unitary space of particle internal states. **81a:81144**

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Ravndal, F. Supersymmetric Dirac particles in external fields. **81d:81142**

Rohrlich, F. Lectures on the relativistic string. **81e:81191**

Roman, P. Can the microstructure of space-time explain hadrons? (*See* **81j:81002b**)

Rosen, Nathan (*with* Szamosi, G.) Classical particles with unusual properties. **81d:81143**

Sánchez, Norma Interacting fields in noninertial frames: one-loop corrections to particle production. **81m:81097**

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Sotkov, G. M. (*with* Zaĭkov, R. P.) Quantum dynamics of the relativistic membrane. **81a:81145**

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Takabayasi, Takehiko Relativistic mechanics of confined particles as extended model of hadrons. The bilocal case. **81e:81192**
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Unwin, S. D. Quantised spin-1 field in flat Clifford-Klein space-times. **81f:81100**
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Wald, Robert M. *See* **Horowitz, Gary T., 81a:81141**
Weber, H. J. *See* **Namyslowski, J. M., 81e:81190**
Zalkov, R. P. *See* **Sotkov, G. M., 81a:81145**

secondary classifications:

Aharonov, Yakir (*with* Albert, David Z.) States and observables in relativistic quantum field theories. **(81e:81086)**
Albert, David Z. *See* **Aharonov, Yakir, (81e:81086)**
Berezin, F. A. The mathematical basis of supersymmetric field theories. **(81l:81098)**
Bonometto, S. A. (*with* Pollock, M. D.) The unitary Bogoliubov transformation for a quantized scalar field in a Friedman space-time. **(81k:83024)**
Castrigiano, D. P. L. (*with* Henrichs, Rolf Wim) Systems of covariance and subrepresentations of induced representations. **(81j:22010)**
Dehnen, H. *See* **Schäfer, G., (81g:83025)**
DeWitt, Bryce S. Quantum gravity. (*See* **81k:83003**)
(Dittrich, Walter) *See* **Recent developments in particle and field theory, (81a:81007)**
Ford, L. H. Twisted scalar and spinor strings in Minkowski spacetime. **(81c:81028)**
Galvão, Carlos A. P. Classical $\frac{1}{2}$ spin particles interacting with gravitational fields: a supersymmetric model. **(81h:83007)**
(Gregory, Bernard) *See* **Weisskopf, Victor F., (81e:81002)**
Grib, A. A. (*with* Mostepanenko, V. M.) Spontaneous breaking of gauge and discrete symmetries in curved space-time. (Russian) **(81h:81060)**
Grišćuk, L. P. (*with* Popova, A. D.) Weak supergravity. **(81b:83004)**
Hakin, Rémi (*with* Heyvaerts, Jean) Excitation spectrum of the relativistic quantum plasma. **(81d:82044)**
Harris, E. G. Are all forces due to spin-curvature coupling? (Italian and Russian summaries) **(81e:81098)**
Henrichs, Rolf Wim *See* **Castrigiano, D. P. L., (81j:22010)**
Heyvaerts, Jean *See* **Hakin, Rémi, (81d:82044)**
(van Hove, Léon) *See* **Weisskopf, Victor F., (81e:81002)**
(Jacob, M.) *See* **Weisskopf, Victor F., (81e:81002)**
Kuchař, Karel Gravitation, geometry, and nonrelativistic quantum theory. **(81j:83037)**
Lapčinskiĭ, V. G. (*with* Rubakov, V. A.) Canonical quantization of gravity and quantum field theory in curved space-time. **(81b:83005)**
Mamaev, S. G. (*with* Mostepanenko, V. M.) Isotropic cosmological models determined by vacuum quantum effects. **(81e:83056)**
Mostepanenko, V. M. *See* **Mamaev, S. G., (81e:83056)** *and* **Grib, A. A., (81h:81060)**
Namsrai, H. Relativistic Feynman-type integrals. **(81e:81041)**
Orland, H. Polymer expansion of the quantum many-body problem. **(81m:82013)**
Parker, Leonard Applied quantum gravity: applications of the semiclassical theory. (*See* **81k:83003**)
Pollock, M. D. *See* **Bonometto, S. A., (81k:83024)**
Popova, A. D. *See* **Grišćuk, L. P., (81b:83004)**
Rubakov, V. A. *See* **Lapčinskiĭ, V. G., (81b:83005)**
Schäfer, G. (*with* Dehnen, H.) On the gravitational radiation formula. **(81g:83025)**
Ślnlatycki, Jędrzej Application of geometric quantization in quantum mechanics. **(81c:58040)**
Thom, René Stable defects in ordered media. **(81j:82007)**
Toms, David J. Symmetry breaking and mass generation by space-time topology. **(81g:81073)**
Weisskopf, Victor F. ★The 1979 Bernard Gregory lectures. **(81e:81002)**
Field theory ★Recent developments in particle and field theory. **(81a:81007)**
Gregory Lectures *See* **Weisskopf, Victor F., (81e:81002)**
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Particle theory ★Recent developments in particle and field theory. **(81a:81007)**
Recent developments in particle and field theory ★Recent developments in particle and field theory. **(81a:81007)**
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Particles and Fields ★Recent developments in particle and field theory. **(81a:81007)**
Tübingen ★Recent developments in particle and field theory. **(81a:81007)**

81N05 Mathematically heuristic quantum mechanics (must also be assigned at least one other classification number in this section)

secondary classifications:

Hatch, R. L. (*with* Sierk, A. J.) Nuclear hydrodynamics for ellipsoidal shapes. **(81g:81110)**
Politzer, H. David Power corrections at short distances. **(81h:81137)**
Sierk, A. J. *See* **Hatch, R. L., (81g:81110)**

82-XX STATISTICAL PHYSICS, STRUCTURE OF MATTER

82–01 Elementary exposition, textbooks

82–02 Advanced exposition (research surveys, monographs, etc.)

Kociński, Jerzy (*with* Wojtczak, Leszek) ★Critical scattering theory. **81e:82001**
(Landau, Lev D.) *See* **Lifšic, E. M.; et al., 81h:82001**
Lifšic, E. M. (*with* Pitaevskiĭ, L. P.) ★Теоретическая физика ("Ландау-Лифшиц"). Том 10. (Russian) [Theoretical physics ("Landau-Lifšic"). Vol. 10] **81k:82001**
Lovesey, Stephen W. ★Condensed matter physics. **81a:82001**
Martin, Philippe A. ★Modèles en mécanique statistique des processus irréversibles. (French) [Models of irreversible processes in statistical mechanics] **81c:82002**
Pitaevskiĭ, L. P. *See* **Lifšic, E. M., 81h:82001**
Wojtczak, Leszek *See* **Kociński, Jerzy, 81e:82001**

82–03 Historical (must also be assigned at least one classification number from Section 01)

Bogoljubov, N. N. ★Избранные труды по статистической физике. (Russian) [Selected works in statistical physics] **81l:82001**

secondary classifications:

Byrne, Patrick H. Statistical and causal concepts in Einstein's early thought. **(81c:01026)**
(Donny, François) *See* **Trevena, David H., (81j:01027)**
(Einstein, Albert) *See* **Byrne, Patrick H., (81c:01026)** *and* **Ezawa, Hiroshi, (***See* **81f:01039)**
Ezawa, Hiroshi Einstein's contribution to statistical mechanics. (*See* **81f:01039**)
Janouch, F. ★Lev D. Landau: his life and work. **(81f:01031)**
(Landau, Lev D.) *See* **Janouch, F., (81f:01031)**
Trevena, David H. The pioneer work of François Donny on the existence of tension in liquids. **(81j:01027)**
Umenaga, Kaoru Herapath's theory of matter. (Japanese. English summary) **(81m:01040)**
Bibliography:
Landau, Lev D. *See* **Janouch, F., (81f:01031)**
Biography:
Landau, Lev D. *See* **Janouch, F., (81f:01031)**

82–04 Explicit machine computation and programs (not the theory of computation or programming)

secondary classifications:

Alexandrowicz, Z. Critically branched chains and percolation clusters. **(81k:82029)**
Argyrakis, Panos (*with* Kopelman, Raoul) Correlated random-walk simulations in simple and binary lattices. **(81g:82036)**
Banavar, Jayanth R. *See* **Ditzian, Ruth V.; et al., (81g:82072)**
Binder, K. *See* **Morgenstern, I.; et al., (81k:82064)**
Blöte, H. W. J. (*with* Swendsen, R. H.) Critical behavior of the four-dimensional Ising model. **(81i:82020)**
Ditzian, Ruth V. (*with* Banavar, Jayanth R.; Grest, G. S.; Kadanoff, Leo P.) Phase diagram for the Ashkin-Teller model in three dimensions. **(81g:82072)**
Dunfield, L. G. (*with* Noolandi, J.) Real-space renormalization-group transformation for semi-infinite Ising systems. **(81g:82019)**
Eschbach, P. D. (*with* Stauffer, D.; Herrmann, H. J.) Correlation-length exponent in two-dimensional percolation and Potts model. **(81k:82016)**
Florenzato, A. (*with* Stella, A. L.; Toigo, F.) On a new criterion for the determination of parameters in position space renormalization transformations. **(81h:82020)**
Fisher, Michael E. *See* **Selke, Walter, (81k:82067)**
Grest, G. S. *See* **Ditzian, Ruth V.; et al., (81g:82072)**
Gunton, J. D. *See* **Katz, Sheldon L., (81k:82060)**
Herrmann, H. J. *See* **Eschbach, P. D.; et al., (81k:82016)**
Hornreich, R. M. *See* **Morgenstern, I.; et al., (81k:82064)**
Kadanoff, Leo P. *See* **Ditzian, Ruth V.; et al., (81g:82072)**
Katz, Sheldon L. (*with* Gunton, J. D.) Monte Carlo low-temperature study of the kinetic three-spin triangular Ising model. **(81k:82060)**
Kawabata, Chikao Monte Carlo simulation of two-dimensional Ising model with logarithmic exchange interaction. **(81k:82050)**
Kopelman, Raoul *See* **Argyrakis, Panos, (81g:82036)**
Landau, D. P. Critical behavior of the simple cubic Ising model with quenched site impurities. **(81g:82023)**
Morgenstern, I. (*with* Binder, K.; Hornreich, R. M.) Two-dimensional Ising model in random magnetic fields. **(81k:82064)**
Nakanishi, Hisao (*with* Stanley, H. Eugene) Scaling studies of percolation phenomena in systems of dimensionality two to seven: cluster numbers. **(81g:82045)**
Noolandi, J. *See* **Dunfield, L. G., (81g:82019)**
Pišat, M. *See* **Taranko, E.; et al., (81h:82037)**
Selke, Walter (*with* Fisher, Michael E.) Two-dimensional Ising models with competing interactions—a Monte Carlo study. **(81k:82067)**
Stanley, H. Eugene *See* **Nakanishi, Hisao, (81g:82045)**
Stauffer, D. *See* **Eschbach, P. D.; et al., (81k:82016)**
Stella, A. L. *See* **Florenzato, A.; et al., (81h:82020)**
Swendsen, R. H. *See* **Blöte, H. W. J., (81i:82020)**
Taranko, E. (*with* Taranko, R.; Wysokiński, K. I.; Pišat, M.) Optical conductivity of substitutionally disordered alloys: intraband transitions. **(81h:82037)**
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Toigo, F. *See* **Florenzato, A.; et al., (81h:82020)**
Wysokiński, K. I. *See* **Taranko, E.; et al., (81h:82037)**

82–05 Experimental papers

82–06 Proceedings, conferences, etc.

(Enz, Charles P.) *See* **Dynamical critical phenomena and related topics, 81i:82002**
(Minlos, R. A.) *See* **Gibbs states in statistical physics, 81i:82003**
(Pacault, Adolphe) *See* **Synergetics: Far from equilibrium, 81a:82002**
(Pękalski, Andrzej) *See* **Modern trends in the theory of condensed matter, 81k:82002**

(Przystawa, Jerzy A.) *See* **Modern trends in the theory of condensed matter, 81h:82002**
(Vidal, Christian) *See* **Synergetics: Far from equilibrium, 81a:82002**
Bordeaux ★Synergetics. Far from equilibrium. **81a:82002**
Conference:
Dynamical Critical Phenomena and Related Topics ★Dynamical critical phenomena and related topics. **81i:82002**
Far from Equilibrium: Instabilities and Structures ★Synergetics. Far from equilibrium. **81a:82002**
Dynamical critical phenomena and related topics ★Dynamical critical phenomena and related topics. **81i:82002**
Geneva ★Dynamical critical phenomena and related topics. **81i:82002**
Gibbs states in statistical physics ★Гиббсовские состояния в статистической физике. (Russian) [Gibbs states in statistical physics] **81i:82003**
Karpacz ★Modern trends in the theory of condensed matter. **81h:82002**
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Winter School:
Karpacz, Theoretical Physics ★Modern trends in the theory of condensed matter. **81h:82002**

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(Bardos, Claude) *See* **Bifurcation phenomena in mathematical physics and related topics, (81f:00012)**
(Bazarov, I. P.) *See* **History and methodology of the natural sciences, (81j:01002)**
(Bensis, Daniel) *See* **Bifurcation phenomena in mathematical physics and related topics, (81f:00012)**
(Ingolnitzer, Daniel) *See* **Complex analysis, microlocal calculus and relativistic quantum theory, (81e:81003)**
(Sarangov, C. S.) *See* **History and methodology of the natural sciences, (81j:01002)**
Bifurcation phenomena in mathematical physics and related topics ★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**
Calculus ★Complex analysis, microlocal calculus and relativistic quantum theory. **(81e:81003)**
Cargèse ★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**
Classical and quantum aspects of completely integrable nonlinear systems ★Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) **(81m:35001)**
Colloquium:
Complex Analysis, Microlocal Calculus and Relativistic Quantum Theory ★Complex analysis, microlocal calculus and relativistic quantum theory. **(81e:81003)**
Complex analysis, microlocal calculus and relativistic quantum theory ★Complex analysis, microlocal calculus and relativistic quantum theory. **(81e:81003)**
History and methodology of the natural sciences ★История и методология естественных наук. Вып. XXI. (Russian) [History and methodology of the natural sciences. No. XXI] **(81j:01002)**
Les Houches ★Complex analysis, microlocal calculus and relativistic quantum theory. **(81e:81003)**
NATO Advanced Study Institute:
Bifurcation Phenomena in Mathematical Physics and Related Topics ★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**
Nonlinear systems ★Classical and quantum aspects of completely integrable nonlinear systems. (Japanese) **(81m:35001)**
Physics ★История и методология естественных наук. Вып. XXI. (Russian) [History and methodology of the natural sciences. No. XXI] **(81j:01002)**
★Bifurcation phenomena in mathematical physics and related topics. **(81f:00012)**
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82A05 Mathematical general statistical mechanics

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Arsen'ev, A. A. Uniqueness of Kubo-Martin-Schwinger states for classical dynamical systems with infinite-dimensional phase space. (Russian. English summary) **81k:82002**
Au-Yang, Helen (*with* Fisher, Michael E.) Wall effects in critical systems: scaling in Ising model strips. **81e:82002**
Barabanenkov, Ju. N. Cauchy problem for the stochastic Liouville equation with random-variable perturbation Hamiltonian in the form of a bounded operator. (Russian. English summary) **81a:82003**
Bellomo, Nicola Mathematical modeling of the evolution equation of the dynamics of a large class of stochastic systems with kinetic interaction. **81m:82001**
Bender, Carl M. (*with* Cooper, Fred; Guralnik, Gerald; Rose, Harvey A.; Sharp, David H.) Strong coupling expansion for classical statistical dynamics. **81h:82003**
Bensis, Daniel Bifurcations in the Diophant moment problem. (*See* **81f:00012**)
Bishop, A. R. *See* **Currie, J. F.; et al., 81i:82004**
Blanchard, Philippe Caractérisation de processus par la méthode des spécifications locales. **81a:82004**
Boel, R. J. *See* **Kasteleyn, P. W., 81i:82006**
Bricmont, Jean (*with* Lebowitz, Joel L.; Pfister, Charles E.) On the equivalence of boundary conditions. **81j:82001**
Brydges, David C. (*with* Federbush, Paul) Debye screening. **81j:82002**
Buckholtz, Helen *See* **Ermak, Donald L., 81d:82003**
Campanino, Massimo (*with* Del Grosso, Gabriella; Tirozzi, Brunello) Local limit theorem for Gibbs random fields of particles and unbounded spins. **81c:82003**
Caroli, B. (*with* Caroli, C.; Roulet, B.) Growth of fluctuations from a marginal equilibrium. **81d:82001**
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Chakraborti, C. G. Sufficiency and statistical mechanics. **81e:82003**
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Cohen, Joel E. Convexity properties of products of random nonnegative matrices. **81m:82002**
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Dunlop, François (*with* Newman, Charles M.) Multicomponent field theories and classical rotators. (Russian) (*See* **81f:81002**)
Zeros of the partition function and Gaussian inequalities for the plane rotator model. **81d:82002**
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Ermak, Donald L. (*with* Buckholtz, Helen) Numerical integration of the Langevin equation: Monte Carlo simulation. **81d:82003**
Ernst, M. H. *See* **Futcher, E.; et al., 81g:82004a** *and* **Hendriks, E. M.; et al., 81g:82004b**
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Evans, Glenn T. Momentum space diffusion equations for chain molecules. **81e:82004**
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French, J. B. (*with* Mello, P. A.; Pandey, Akhilesh) Statistical properties of many-particle spectra. II. Two-point correlations and fluctuations. **81h:82004a**
Fröhlich, Jürg Classical and quantum statistical mechanics in one and two dimensions: two-component Yukawa—and Coulomb systems. (Russian) (*See* **81f:81002**)
(*with* Israel, Robert B.; Lieb, Elliott H.; Simon, B.) Phase transitions and reflection positivity. II. Lattice systems with short-range and Coulomb interactions. **81h:82005**
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Griffiths, Robert B. (*with* Pearce, Paul A.) Mathematical properties of position-space renormalization-group transformations. **81m:82005**
Gruber, Ch. (*with* Martin, Philippe A.) Equilibrium properties of classical systems with long range forces. **81i:82005**
(*with* Lugrin, Ch.; Martin, Philippe A.) Equilibrium properties of classical systems with long-range forces. BBGKY equation, neutrality, screening, and sum rules. **81m:82006**
(*with* Martin, Philippe A.) Can classical statistical mechanics describe an infinite crystal? **81g:82005**
Guralnik, Gerald *See* **Bender, Carl M.; et al., 81h:82003**
Guyer, R. A. Dynamics of nonlinear systems: the heavy damping limit. **81g:82006**
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(Haag, Rudolf) *See* **Trych-Pohlmeyer, Ewa B., 81a:82008**
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Harper, P. G. The single-particle ensemble and its complex representation. **81d:82004**
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Kanal, M. (*with* Moses, H. E.; Mitter, Sanjoy K.) A variational principle for the linear filter matrix and an interpretation for the maximum value of the functional. **81a:82006**

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Kaĭapov, I. A. On the justification of the renormalization group method. (Russian. English summary) **81h:82007**

Kasteleyn, P. W. (*with* Boel, R. J.) On a class of inequalities and identities for spin correlation functions of general Ising models. **81i:82006**

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Lieb, Elliott H. The $N^{5/3}$ law for bosons. **81h:82008**

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Lumsden, Charles J. (*with* Trainor, Lynn E. H.) A generalized canonical approach to the statistical mechanics of constrained systems. **81m:82009**

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Mörsch, M. *See* **Risken, H.; et al., 81m:82010**

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Okamoto, Hisao *See* **Nagano, Katsuhiko; et al., 81g:82009**

Okamura, Y. *See* **Chen, J. T.; et al., 81e:82004**

Pandey, Akhilesh Statistical properties of many-particle spectra. III. Ergodic behavior in random-matrix ensembles. **81h:82004b**

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Perram, J. W. (*with* Smith, E. R.) The role of poles of the structure factor in determining properties of the hard sphere fluid. **81d:82008**

Pfister, Charles E. *See* **Bricmont, Jean; et al., 81j:82001**

(Pirogov, S. A.) *See* **Dunlop, François; et al., (***See* **81f:81002)** *and* **Fröhlich, Jürg, (***See* **81f:81002)**

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Smith, E. R. *See* **Perram, J. W., 81d:82008**

Spohn, Herbert Kinetic equations from Hamiltonian dynamics: Markovian limits. **81e:82010**

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Suhov, Ju. M. *See* **Dobrušin, R. L., 81j:82003**

Sutherland, Bill Exact solution for the time evolution of a one-dimensional system. **81f:82003**

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Trainor, Lynn E. H. *See* **Lumsden, Charles J., 81m:82009**

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Yasue, Kunio *See* **Zambrini, J.-C., 81e:82012**

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Žilinskiĭ, A. P. *See* **Golant, V. E.; et al., 81c:82018**

secondary classifications:

Banerjee, R. S. *See* **Roy Chowdhury, A.; et al., (81e:35009)**

Batchelor, D. B. *See* **Weitzner, Harold, (81e:76093)**

Baus, Marc (*with* Hansen, Jean-Pierre) Statistical mechanics of simple Coulomb systems. **(81a:82009)**

Bernstein, Ira B. *See* **Friedland, Lewis, (81j:76104)**

Bogomolov, S. V. Convergence and application of the method of summary approximation for a system of Vlasov equations. (Russian) **(81d:35068)**

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Bricmont, Jean (*with* Lebowitz, Joel L.; Pfister, Charles E.) Non-translation-invariant Gibbs states with coexisting phases. III. Analyticity properties. **(81c:82029)**

Brysk, Henry A formulation of plasma transport in the laser-fusion regime. **(81a:82057)**

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Colestock, P. L. (*with* Kulp, J. L.) Geometric optics of lower hybrid waves in nonuniform plasmas. **(81d:76102)**

Davidson, Ronald C. *See* **Uhm, Han S., (81b:76076)**

Dawson, J. M. *See* **Tajima, T.; et al., (81m:76059)**

Dolginov, A. Z. (*with* Urpin, V. A.) Thermomagnetic instability of a nonuniform plasma. **(81b:76070)**

Dreĭzin, Ju. A. (*with* Myšeckaja, E. E.; Sosnin, N. V.; Favorskiĭ, A. P.) Numerical modelling of stationary plasma configurations by the variational approach. (Russian. English summary) **(81d:76115)**

Esikova, N. B. A method of numerical solution of the Vlasov equation. (Russian) **(81k:65112)**

Favorskiĭ, A. P. *See* **Dreĭzin, Ju. A.; et al., (81d:76115)**

Ford, G. W. (*with* O'Connell, R. F.) Absorption of radiation in a magnetoplasma and application to the laser-fusion process. **(81e:76088)**

Friedland, Lewis (*with* Bernstein, Ira B.) Geometric optics in plasmas characterized by non-Hermitian dielectric tensors. **(81j:76104)**

Green, James *See* **Peratt, Anthony L.; et al., (81d:76122)**

(Gresillon, Dominique) *See* **Intrinsic stochasticity in plasmas, (81e:76086)**

Guillopé, C. Remarques sur un problème de valeurs propres non linéaires faisant intervenir des fonctions non différentiables. **(81i:35132)**

Gvozdev, V. V. *See* **Bokut', B. V.; et al., (81k:78009)**

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Inoue, Sanae (*with* Itoh, Kimitaka; Yoshikawa, Shoichi) Critical conditions for drift, drift-Alfvén and drift-tearing instabilities of finite-β plasma in sheared magnetic field. **(81b:76071)**

Itoh, Kimitaka *See* **Inoue, Sanae; et al., (81b:76071)**

Kulp, J. L. *See* **Colestock, P. L., (81d:76102)**

(Landau, Lev D.) *See* **Lifšic, E. M.; et al., (81h:82001)**

(Laval, Guy) *See* **Intrinsic stochasticity in plasmas, (81e:76086)**

Lazzaro, E. (*with* Pavlenko, V. N.; Musalevskiĭ, V. V.) Echo in a semibounded plasma with boundary defined by electrostatic-potential profiles. (Italian summary) **(81f:76053)**

Leboeuf, J. N. *See* **Tajima, T.; et al., (81m:76059)**

Lebowitz, Joel L. *See* **Bricmont, Jean; et al., (81c:82029)**

Letavin, M. I. On the problem of control of charged particle beams with account taken of their own charge. (Russian) **(81h:78009)**

Lifšic, E. M. (*with* Pitaevskiĭ, L. P.) ★Теоретическая физика ("Ландау-Лифшиц"). Том 10. (Russian) [Theoretical physics ("Landau-Lifšic"). Vol. 10] **(81h:82001)**

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Mathers, C. D. Simplified expressions for the calculation of the viscosity of partly ionized gases. **(81h:76070)**

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Musalevskiĭ, V. V. *See* **Lazzaro, E.; et al., (81f:76053)**

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Nielsen, Dale *See* **Peratt, Anthony L.; et al., (81d:76122)**

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Okabe, Takayoshi *See* **Ukai, Seiji, (81i:35007)**

Pataraja, A. D. (*with* Melikidze, G. I.) Modulational instability of nonlinear waves in a relativistic plasma, with account taken of nonlinear Landau damping. (Russian) **(81d:76121)**

Pavlenko, V. N. *See* **Lazzaro, E.; et al., (81f:76053)**

Peratt, Anthony L. (*with* Green, James; Nielsen, Dale) Evolution of colliding plasmas. **(81d:76122)**

Pfister, Charles E. *See* **Bricmont, Jean; et al., (81c:82029)**

Pitaevskiĭ, L. P. *See* **Lifšic, E. M., (81h:82001)**

Roy, T. *See* **Roy Chowdhury, A.; et al., (81e:35009)**

Roy Chowdhury, A. (*with* Banerjee, R. S.; Roy, T.) A soliton perturbation scheme for 3×3 inverse scattering transform. **(81e:35009)**

Rybicki, George B. *See* **Lightman, Alan P., (81a:81111)**

Šapiro, V. E. *See* **Loginov, V. M., (81c:78005)**

Serdjukov, A. N. *See* **Bokut', B. V.; et al., (81k:78009)**

Sosnin, N. V. *See* **Dreĭzin, Ju. A.; et al., (81d:76115)**

Tajima, T. (*with* Leboeuf, J. N.; Dawson, J. M.) A magnetohydrodynamic particle code with force free electrons for fluid simulations. **(81m:76059)**

Tchen, Chan Mou Fermeture par relaxation d'un modèle cinétique de plasma en turbulence forte. (English summary) **(81e:76091)**

Teichmann, Jiri Stochastic stability of MHD equilibria. **(81j:76039)**

Ueyama, Hiroshi The stochastic Boltzmann equation and hydrodynamic fluctuations. **(81d:82031)**

Uhm, Han S. (*with* Davidson, Ronald C.) Kinetic description of coupled transverse oscillations in an intense relativistic electron beam-plasma system. **(81b:76076)**

Ukai, Seiji (*with* Okabe, Takayoshi) On classical solutions in the large in time of two-dimensional Vlasov's equation. **(81i:35007)**

Ul'trivanov, I. P. Boundary control of a string of plasma with distributed flow. (Russian) **(81e:93073)**

Urpin, V. A. *See* **Dolginov, A. Z., (81b:76070)**

Vaĭnštein, S. I. Plasma polarization in a magnetic field. **(81e:76092)**

Wadati, Miki *See* **Ichikawa, Yoshi H., (81e:35113)**

Weitzner, Harold (*with* Batchelor, D. B.) An eikonal expansion of the Vlasov-Maxwell equations valid near cyclotron resonance. **(81e:76093)**

Wiley, J. C. (*with* Hinton, F. L.) Steady-state response of the electron distribution function to an applied electric field. **(81d:76129)**
Yoshikawa, Shoichi *See* **Inoue, Sanae; et al., (81b:76071)**
Cargèse ★Intrinsic stochasticity in plasmas. **(81e:76086)**
Intrinsic stochasticity in plasmas ★Intrinsic stochasticity in plasmas. **(81e:76086)**
Stochasticity ★Intrinsic stochasticity in plasmas. **(81e:76086)**
Workshop:
Intrinsic Stochasticity in Plasmas ★Intrinsic stochasticity in plasmas. **(81e:76086)**

82A50 Liquids

Blum, Lesser Solution of the Ornstein-Zernike equation for a mixture of hard ions and Yukawa closure. **81e:82043**
Bunge, Hans-Joachim *See* **Esling, Claude; et al., 81m:82033**
Chen, M. Differential-difference equations for the radial distribution function of hard rods and hard spheres under Percus-Yevick approximation. **81a:82037**
Cioranescu, Doïna (*with* Dias, João-Paulo) A time dependent coupled system related to the tridimensional equations of a nematic liquid crystal. **81d:82047**
Croxton, Clive A. *See* **Osborn, Thomas R., 81h:82040**
Dias, João-Paulo *See* **Cioranescu, Doïna, 81d:82047**
Enz, Charles P. Fokker-Planck description of Navier-Stokes fluid. **81i:82034**
Esling, Claude (*with* Bunge, Hans-Joachim; Muller, Jacques) Description de la texture par des fonctions de distribution sur l'espace des transformations orthogonales. Implications du centre d'inversion. (English summary) **81m:82033**
Evans, Richard B. (*with* Sluckin, T. J.) A density functional theory for inhomogeneous charged fluids. Application to the surfaces of molten salts. **81e:82044**
Felderhof, B. U. *See* **Meister, T. F., 81f:82029**
Fisch, Ronald Scaling theory of glass. **81g:82054**
Freasier, B. C. *See* **Thompson, N. E., 81k:82042**
Gaylor, K. J. (*with* Snook, I. K.; van Megen, W. J.; Watts, R. O.) Dynamics of colloidal systems: time-dependent structure factors. **81e:82045**
Gubbins, K. E. Structure of nonuniform molecular fluids: integro-differential equations for the density-orientation profile. **81k:82039**
Hazoume, Roger Paul An integral equation for classical fluids at equilibrium. **81f:82028**
Kaneda, Yukio Brownian motion of an almost spherical drop of viscous fluid and fluctuating hydrodynamics. **81d:82048**
Kayser, R. F., Jr. (*with* Raveché, H. J.) Equivalence of integral equations in the molecular theory of fluids. **81a:82038**
Kerley, Gerald I. Perturbation theory and the thermodynamic properties of fluids. I. General theory. **81h:82039a**
Perturbation theory and the thermodynamic properties of fluids. II. The CRIS model. **81h:82039b**
Perturbation theory and the thermodynamic properties of fluids. III. Inverse-power and 6-12 potentials. **81h:82039c**
Kleman, M. Developable domains in hexagonal liquid crystals. (French summary) **81e:82046**
MacGowan, David A new derivation of the reference hypernetted chain equation. **81k:82040**
McClung, R. E. D. The Fokker-Planck-Langevin model for rotational Brownian motion. I. General theory. **81g:82055**
van Megen, W. J. *See* **Gaylor, K. J.; et al., 81e:82045**
Meister, T. F. (*with* Felderhof, B. U.) Cluster expansion for fluids with long-range interactions. **81f:82029**
Melnyk, Theodor W. (*with* Smith, William R.) Perturbation theories for molecular fluids. I. The RAM and BLIP function theories for hard dumbbells. **81k:82041**
Muller, Jacques *See* **Esling, Claude; et al., 81m:82033**
Nishigori, T. Microscopic theory of memory functions. **81g:82056**
Osborn, Thomas R. (*with* Croxton, Clive A.) Monotonic and oscillatory density profiles at the free liquid surface for simple atomic fluids. **81h:82040**
Pratt, Lawrence R. Effective field of a dipole in nonpolar polarizable fluids. **81d:82049**
Raveché, H. J. *See* **Kayser, R. F., Jr., 81a:82038**
Rudnick, Joseph Mean-field theory of spin-glasses. **81g:82057**
Sabry, A. A. Symmetric and asymmetric stabilities of charged liquid drops. **81c:82022**
Sak, J. *See* **Vause, C., 81g:82058**
Senatore, G. (*with* Tosi, M. P.) Theory of the surface dipole layer and of surface tension in liquids of charged particles. (Italian summary) **81e:82047**
Sluckin, T. J. *See* **Evans, Richard B., 81e:82044**
Smith, William R. *See* **Melnyk, Theodor W., 81k:82041**
Snook, I. K. *See* **Gaylor, K. J.; et al., 81e:82045**
Stanley, H. Eugene (*with* Teixeira, J.) Interpretation of the unusual behavior of H_2O and D_2O at low temperatures: tests of a percolation model. **81m:82034**
Steele, William A. Force-torque correlations. **81d:82050**
Teixeira, J. *See* **Stanley, H. Eugene, 81m:82034**
Thompson, N. E. (*with* Freasier, B. C.) A new method of solution of the Ornstein-Zernike equation for a two-dimensional fluid. **81k:82042**
Tosi, M. P. *See* **Senatore, G., 81e:82047**
Vause, C. (*with* Sak, J.) Non-Ising-like effects in the liquid-vapor transition: singularity in the coexistence curve diameter. **81g:82058**
Watts, R. O. *See* **Gaylor, K. J.; et al., 81e:82045**
Wertheim, M. S. Factorization of the direct correlation function. I. Basic results. **81g:82059**
Zusman, L. D. Outer-sphere electron transfer in polar solvents. **81g:82060**

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Azizjan, A. O. (*with* Klinger, M. I.) Quantum theory of antisymmetric kinetic coefficients of proton conductors. (Russian. English summary) **(81m:82046)**
Boucher, E. A. Capillary phenomena: properties of systems with fluid/fluid interfaces. **(81j:76014)**
Brand, H. (*with* Pleiner, H.) Nonlinear reversible hydrodynamics of liquid crystals and crystals. (French summary) **(81h:82043)**
Casas-Vazquez, J. *See* **Jou, D.; et al., (81d:82025)**
Dzjaloŝinskiĭ, I. E. (*with* Volovik, G. E.) Poisson brackets in condensed matter physics. **(81a:81129)**
Eu, Byung Chan The generalized moment method for transport phenomena in dense fluids. **(81a:82058)**
Florea, Cristian Euler's problem for nematic liquid crystals. (Romanian. English summary) **(81d:82054)**
Jou, D. (*with* Rubi, J. M.; Casas-Vazquez, J.) Hydrodynamical fluctuations in extended irreversible thermodynamics. **(81d:82025)**
Klinger, M. I. *See* **Azizjan, A. O., (81m:82046)**
Levich, E. The large-momentum, high-frequency spectrum of a randomly stirred fluid. **(81k:76029)**
Pauli, Hans-Christian On classical hydrodynamics and collective motion as approximation to the nuclear many-body problem. **(81e:81148)**
Perram, J. W. (*with* Smith, E. R.) The role of poles of the structure factor in determining properties of the hard sphere fluid. **(81d:82008)**
Pfleiderer, H. An alternative method of solving Poisson's equation for MOS capacitors. (German summary) **(81k:65093)**
Pleiner, H. *See* **Brand, H., (81h:82043)**
Rubi, J. M. *See* **Jou, D.; et al., (81d:82025)**
Smith, E. R. *See* **Perram, J. W., (81d:82008)**
Volovik, G. E. *See* **Dzjaloŝinskiĭ, I. E., (81a:81129)**

82A51 Polymers

82A55 Solids

Allam, M. A. *See* **Obada, A.-S. F.; et al., 81d:82053**
Arai, Tadashi Quasiparticle excitations, the relaxation, and transport properties in the narrow-band region of the Hubbard model. **81e:82048**
Belousov, I. V. (*with* Sinjak, V. A.) Solutions of the two-zone equation of Kane's model of a semiconductor in an intensive electromagnetic wave field. (Russian. English summary) **81k:82043**
De Dominicis, C. (*with* Gabay, M.; Garel, T.; Orland, H.) White and weighted averages over solutions of Thouless Anderson Palmer equations for the Sherrington Kirkpatrick spin glass. (French summary) **81i:82051**
Eljutin, P. V. The spectrum of spatially disordered systems. (Russian) **81j:82025**
El-Samman, A.-R. A. *See* **Obada, A.-S. F.; et al., 81d:82053**
Entel, P. (*with* Mühlschlegel, B.; Ono, Y.) On the electrical conductivity of intermediate valence compounds. **81d:82051**
Gabay, M. *See* **De Dominicis, C.; et al., 81i:82051**
Garel, T. *See* **De Dominicis, C.; et al., 81i:82051**
Hirsch, Jorge E. Renormalization-group study of the Hubbard model. **81i:82052**
Horvatić, B. (*with* Zlatić, V.) Perturbation expansion for the asymmetric Andersen Hamiltonian. (German summary) **81d:82052**
Jonson, M. (*with* Mahan, G. D.) Mott's formula for the thermopower and the Wiedemann-Franz law. **81c:82023**
Li, Tie Cheng (*with* Sun, Xin; Woo, Chia Wei) Theory of quantum solids: effect of lattice symmetry and anisotropy in the pair-correlation function. **81g:82061**
Mahan, G. D. *See* **Jonson, M., 81c:82023**
Maradudin, Alexei A. (*with* Mazur, Paul) Effects of surface roughness on the van der Waals force between macroscopic bodies. **81h:82041**
Matulionis, A. Determination of the hot electron diffusion coefficient from the spread of a narrow spatial distribution. (Russian. Lithuanian and English summaries) **81g:82062**
Mazur, Paul *See* **Maradudin, Alexei A., 81h:82041**
Medina A., Rodrigo The time-dependent susceptibility of spin glasses. **81i:82053**
Mühlschlegel, B. *See* **Entel, P.; et al., 81d:82051**
Noor Mohammad, S. A test of convergence of the expansion of the screening charge density for impurity ions in semiconductors. (German summary) **81h:82042**
Obada, A.-S. F. (*with* Allam, M. A.; El-Samman, A.-R. A.) Contributions of the correlation functions to the optical constants. (Arabic summary) **81d:82053**
Ono, Y. *See* **Entel, P.; et al., 81d:82051**
Orland, H. *See* **De Dominicis, C.; et al., 81i:82051**
Shaw, Peter B. *See* **Whitfield, George, 81c:82024**
Shrivastava, Keshav N. Magnon-photon interaction in ferromagnets. **81a:82039**
Sinjak, V. A. *See* **Belousov, I. V., 81k:82043**
Sun, Xin *See* **Li, Tie Cheng; et al., 81g:82061**
Trullinger, S. E. Dynamic polarizability of the double-quadratic kink. **81a:82040**
Wahl, F. Eine kanonische Transformation als Lösungsvorschlag für eine Funktionalgleichung. (English summary) **81e:82049**
Whitfield, George (*with* Shaw, Peter B.) Breakdown of perturbation theory for the deformation potential polaron. **81c:82024**
Woo, Chia Wei *See* **Li, Tie Cheng; et al., 81g:82061**
Zlatić, V. *See* **Horvatić, B., 81d:82052**

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Balasubramanian, K. The symmetry groups of nonrigid molecules as generalized wreath products and their representations. **(81f:20016)**
Bányai, L. (*with* Gartner, P.) On the connection between the macroscopical and microscopical evolution in an exactly soluble hopping model. I. Neutral particles. **(81f:82030)**
Bonalumi, R. *See* **Cavalleri, G., (81e:82041)**
Bušvili, L. L. (*with* Menabde, M. G.) Use of averaging method in problems of high-resolution nuclear magnetic resonance in solids. **(81e:81143)**
Cavalleri, G. (*with* Bonalumi, R.) Solution with third-order accuracy for the electron distribution function in weakly ionized gases and intrinsic semiconductors. (Italian and Russian summaries) **(81e:82041)**

Chao, Nai Cheng (*with* De Moura, Marco A.) An equivalent spin Hamiltonian for the Hubbard model. **(81e:82017)**

Chen, H. S. Glassy metals. **(81h:82046)**

De Moura, Marco A. *See* **Chao, Nai Cheng. (81e:82017)**

Eckhardt, Ulrich (*with* Mika, K.) Numerical treatment of incorrectly posed problems—a case study. **(81m:65196)**

Englman, R. (*with* Ranfagni, A.) Nonradiative processes for complex potential surfaces. I. A semiclassical formalism. **(81e:81139a)**

(*with* Ranfagni, A.) Nonradiative processes for complex potential surfaces. II. Application to the linear polarization of the A_T emission on KI:T1. **(81e:81139b)**

Fisch, Ronald Scaling theory of glass. **(81g:82054)**

Gartner, P. *See* **Bányai, L., (81f:82030)**

Lax, Melvin D. (*with* Narayanamurti, V.) Phonon magnification and the Gaussian curvature of the slowness surface in anisotropic media: detector shape effects with application to GaAs. **(81i:81123)**

Ledovskaja, E. M. *See* **Petrašen', M. I., (81k:82050)**

Matsumoto, Hideki (*with* Semenoff, G.; Umezawa, H.; Tachiki, M.) Quantum electrodynamics in solids. **(81d:81136)**

Menabde, M. G. *See* **Bulivili, L. L., (81e:81143)**

Mika, K. *See* **Eckhardt, Ulrich, (81m:65196)**

Mooney, J. W. Constructive existence theorems for problems of Thomas-Fermi type. **(81c:34011)**

Narayanamurti, V. *See* **Lax, Melvin D., (81i:81123)**

Petrašen', M. I. (*with* Ledovskaja, E. M.) The symmetry group of an impure molecule in a crystal used in the interpretation of a vibrational-rotational spectrum. (Russian. English summary) **(81k:82050)**

Ranfagni, A. *See* **Englman, R., (81e:81139a)** *and* **Englman, R., (81e:81139b)**

Rudnick, Joseph Mean-field theory of spin-glasses. **(81g:82057)**

Sato, Mitsuo Derivation of possible framework structures formed from parallel four- and eight-membered rings. **(81e:05052)**

Schlottmann, P. Simple spinless mixed-valence model. I. Coherent-hybridization states versus virtual-bound states. **(81i:81110a)**

Simple spinless mixed-valence model. II. Solution of the isolated *f*-level problem. **(81i:81110b)**

Semenoff, G. *See* **Matsumoto, Hideki; et al., (81d:81136)**

Sivardière, J. Lattice gas model for binary mixtures: miscibility of nematogens and solid-liquid equilibria. **(81i:82025)**

Tachiki, M. *See* **Matsumoto, Hideki; et al., (81d:81136)**

Takayama, Hajime *See* **Wada, Koh, (81h:82024)**

Umezawa, H. *See* **Matsumoto, Hideki; et al., (81d:81136)**

Wada, Koh (*with* Takayama, Hajime) Nonlinear susceptibilities of the Sherrington-Kirkpatrick model and the spherical model. **(81h:82024)**

82A57 Disordered materials, including liquid crystals and spin glasses

82A60 Crystals {For crystallographic group theory, see 20H15.}

Bányai, L. (*with* Gartner, P.) On the connection between the macroscopical and microscopical evolution in an exactly soluble hopping model. I. Neutral particles. **81f:82030**

Barton, G. *See* **Plaskett, J. S., 81m:82036**

Bazarov, I. P. (*with* Nikolaev, P. N.) Method of statistical operators in the theory of crystals. (Russian. English summary) **81f:82031**

Belov, N. V. *See* **Rau, V. G.; et al., 81i:82059**

Birss, R. R. Multivector analysis. I. A comparison with tensor algebra. **81m:82035a**

Multivector analysis. II. A comparison with vector algebra. **81m:82035b**

Blaisten-Barojas, E. *See* **Okamura, Y.; et al., 81g:82065**

Blaszak, M. On superexchange in magnetic insulators. I. General theory. **81e:82050a**

On superexchange in magnetic insulators. II. Symmetry requirements and kinetic approximation. **81e:82050b**

Bonnet, R. Disorientation between any two lattices. **81k:82044**

Brand, H. (*with* Pleiner, H.) Nonlinear reversible hydrodynamics of liquid crystals and crystals. (French summary) **81h:82043**

Čápek, V. *See* **Rips, I. B., 81g:82066**

Chow, H. C. (*with* Vosko, S. H.) Special points for two-dimensional Brillouin zone or Wigner-Seitz cell integrations. (French summary) **81h:82044**

Crisp, G. M. (*with* Walmsley, S. H.) Polyhedral cavity field tensors. **81f:82032**

Dhoore, F. (*with* Phariseau, P.) A relativistic Green matrix method to calculate the surface states in a three-dimensional crystal slab. **81c:82025**

Dias, João-Paulo Nonlinear problems arising in the study of nematic liquid crystals. (*See* **81f:00012)**

Eremin, M. V. (*with* Rakitin, Ju. V.) On kinetic exchange theory. (Russian summary) **81a:82041**

Florea, Cristian Euler's problem for nematic liquid crystals. (Romanian. English summary) **81d:82054**

Fujii, Katsuhiko Symmetry properties of the ring Heisenberg Hamiltonian and new sum rule for its energy eigenvalues. **81k:82045**

Fujita, Shigeji *See* **Okamura, Y.; et al., 81g:82065**

Gartner, P. *See* **Bányai, L., 81f:82030**

Golovko, V. A. Equations with self-consistent field in the quantum statistical theory of a crystal. (Russian) **81i:82054**

Gosar, P. Translational symmetry breaking transformations in the small polaron theory. **81e:82051**

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Sugar, R. L. *See* **Bronzan, J. B., (81a:81050)**

Sullivan, Wayne G. *See* **Flood, R. G., (81m:60178)**

Susskind, Leonard *See* **Fradkin, Eduardo; et al., (81e:81095)**

Swendsen, R. H. *See* **Blöte, H. W. J., (81i:82020)**

Swieca, J. A. *See* **Marino, E. C., (81f:81061)**

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Totafurno, John (*with* Lumsden, Charles J.; Trainor, Lynn E. H.) Structure and function in biological hierarchies: an Ising model approach. **(81g:92001)**

Trainor, Lynn E. H. *See* **Totafurno, John; et al., (81g:92001)**

Trullinger, S. E. (*with* DeLeonardis, R. M.) Analytic statistical mechanics for a two-component-kink system. **(81i:82047)**

See also **Bishop, A. R.; et al., (81g:82047)**

Vanheuverzwijn, Paul Metastable states in the infinite Ising model. **(81d:82012)**

Voigt, Jürgen Regularity of mild solutions of nonlinear parabolic equations. **(81b:34058)**

Yaffe, Laurence G. Confinement in SU(N) lattice gauge theories. **(81a:81061)**

Yankielowicz, S. *See* **Horn, D., (81d:81078)**

Žakula, R. B. *See* **Stamenković, S., (81i:82046)**

Zittartz, J. Existence and renormalization of the sine-Gordon field theory in all dimensions. **(81g:81077)**

82A68 Lattice models

82A70 Transport processes [See also 85A25.]

Abbasov, A. A. (*with* Azizov, S. A.) Analytic solution of the complete eigenvalue problem for a linear chain system. (Russian. Azerbaijani and English summaries) **81k:82069**

(Abdullaev, G. B.) *See* **Problems in experimental and theoretical physics, 81d:82069a**

Aristov, V. V. (*with* Čeremisin, F. G.) The conservative splitting method for the solution of a Boltzmann equation. (Russian) **81c:82031**

Azizjan, A. O. (*with* Klinger, M. I.) Quantum theory of antisymmetric kinetic coefficients of proton conductors. (Russian. English summary) **81m:82046**

Azizov, S. A. *See* **Abbasov, A. A., 81k:82069**

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Bogoljubov, N. N. (*with* Bogoljubov, N. N., Jr.) Generalized kinetic equation for dynamical systems interacting with a phonon field. (Russian. English summary) **81g:82079**

Bogoljubov, N. N., Jr. *See* **Bogoljubov, N. N., 81g:82079**

Braglia, G. L. (*with* Caraffini, G. L.) Second-order theory of electron diffusion perpendicular to an electric field in a gas. **81e:82068**

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Busoni, Giorgio A stationary nonlinear transport problem. **81h:82054**

Caraffini, G. L. *See* **Braglia, G. L., 81e:82068**

Cavalleri, G. (*with* Gatti, E.; González Gascón, F.) Orders of approximation in transport theory for electrons or holes in a scattering medium. (Italian and Russian summaries) **81e:82069**

Čeremisin, F. G. *See* **Aristov, V. V., 81c:82031**

Conlon, Joseph G. Fundamental solutions for the anisotropic neutron transport equation. **81i:82075**

Dao Van Luong (*with* Schmidt-Naake, Gudrun; Pippel, Winfried) Fehlerbetrachtungen bei der Beschreibung von Diffusionsprozessen als Markow-Ketten. **81g:82080**

Derrida, B. Phenomenological renormalisation of the self-avoiding walk in two dimensions. **81m:82047**

Eu, Byung Chan The generalized moment method for transport phenomena in dense fluids. **81a:82058**

Gallone, S. A Gaussian-type quadrature formula and its applications to boundary and interface problems in neutron transport theory. (Italian and Russian summaries) **81g:82081**

Quadrature sums of highest algebraic degree of precision for neutron transport integrals. (Italian and Russian summaries) **81e:82070**

Ganapol, B. D. Solution of the time-dependent monoenergetic neutron transport equation in a semi-infinite medium. **81f:82045**

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Gasymov, T. M. The theory of galvomagnetic phenomena in semiconductors and semimetals under conditions of arbitrary mutual drag and heating of the charge carrier and phonons. (Russian) **81d:82069b**

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González Gascón, F. *See* Cavalleri, G.; et al., 81e:82069
Grabert, Hermann (*with* Weidlich, Wolfgang) Renormalization of transport equations in Fokker-Planck models. 81j:82037
Grecos, A. P. *See* Theodosopulu, M., 81h:82057
Grossmann, S. Variational principle for linear relaxation relations. 81b:82011
Hangelbroek, R. J. On the dispersion function of transport theory. 81d:82070
Hardy, J. (*with* Weber, J.) Diffusion in a periodic wind-tree model. 81e:82071
Kelley, C. T. A comparison of iteration schemes for Chandrasekhar H-equations in multigroup neutron transport. 81a:82059
(Kerimova, T. G.) *See* Problems in experimental and theoretical physics, 81d:82069a
Klinger, M. I. *See* Aziz'jan, A. O., 81m:82046
Lekkerkerker, C. G. On eigendistributions in linear transport theory. 81c:82032
Luĭnikov, A. A. (*with* Tokar', Ja. I.) Transient conditions of coagulation in systems with steady external sources of particles. (Russian) 81m:82048
(Marčuk, G. I.) *See* Sultangazin, U. M., 81h:82056
Mazur, Peter (*with* Bedeaux, D.) An electrothermal instability in a conducting wire: homogeneous and inhomogeneous stationary states for an exactly solvable model. 81m:82049
McKenzie, D. R. *See* Perrins, W. T.; et al., 81c:82033
McPhedran, R. C. *See* Perrins, W. T.; et al., 81c:82033
Meyer, Harold D. (*with* Nelson, Paul, Jr.) Error analysis and convergence for the spectral synthesis method with interfaces. (German summary) 81a:82060
Monchick, L. A comment on the inversion of gas transport properties. 81g:82082
Nelson, Paul, Jr. The effect of data errors for linear transport in slab geometry. 81i:82076
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Nonnenmacher, Theo F. On the kinetics of spinodal decomposition. 81d:82071
Pepper, D. W. (*with* Baker, A. J.) A high-order accurate numerical algorithm for three-dimensional transport prediction. 81g:82083
Perrins, W. T. (*with* McKenzie, D. R.; McPhedran, R. C.) Transport properties of regular arrays of cylinders. 81c:82033
Pippel, Winfried *See* Dao Van Luong; et al., 81g:82080
Pitkäranta, Juhani On the spatial differencing of the discrete ordinate neutron transport equation. 81j:82038
Pomraning, G. C. Radiative transfer via spherical harmonics. 81a:82061
Popykin, A. I. Spectral properties of the stationary diffusion multigroup approximation. (Russian) 81e:82072
Ricci, Riccardo Critical solution for neutron transport in a cylinder with reflector. (Italian summary) 81i:82077
Risken, H. (*with* Vollmer, H. D.) Low friction nonlinear mobility for the diffusive motion in periodic potentials. 81h:82055
Schmidt-Naake, Gudrun *See* Dao Van Luong; et al., 81g:82080
Sengupta, A. (*with* Ganguly, K.) Inverse eigenvalue problem for a finite multiplying slab. 81e:82073
Smelov, V. V. Symmetrization of an odd P_{2N+1}-approximation of a one-velocity transport equation. (Russian) 81a:82062
Sultangazin, U. M. ★Методы сферических гармоник и дискретных ординат в задачах кинетической теории переноса. (Russian) [Methods of spherical harmonics and discrete ordinates in problems of kinetic transport theory] 81h:82056
Theodosopulu, M. (*with* Grecos, A. P.) Linear transport equations for classical fluids. 81h:82057
Tokar', Ja. I. *See* Luĭnikov, A. A., 81m:82048
Victory, H. D., Jr. Criticality problems for slabs and spheres in energy dependent neutron transport theory. 81a:82063
Vollmer, H. D. *See* Risken, H., 81h:82055
Wagh, Arun S. A perturbation method to solve Boltzmann transport equation. 81g:82084
Weber, J. *See* Hardy, J., 81e:82071
Weidlich, Wolfgang *See* Grabert, Hermann, 81j:82037
Williams, M. M. R. On two integro-differential equations arising in particle transport theory. 81c:82034
Some exact solutions in energy dependent transport theory. 81a:82064
Experimental physics ★Некоторые вопросы экспериментальной и теоретической физики. (Russian) [Problems in experimental and theoretical physics] 81d:82069a
Problems in experimental and theoretical physics ★Некоторые вопросы экспериментальной и теоретической физики. (Russian) [Problems in experimental and theoretical physics] 81d:82069a
Theoretical physics ★Некоторые вопросы экспериментальной и теоретической физики. (Russian) [Problems in experimental and theoretical physics] 81d:82069a

secondary classifications:

Abu-Shumays, I. K. Resolution of singularities of the diamond difference approximation. (81k:65141)
Agoškov, V. I. (*with* Lobarev, I. V.) Solution of the eigenvalue problem for a transport equation. (Russian) (81h:65138)
Argyrakis, Panos (*with* Kopelman, Raoul) Correlated random-walk simulations in simple and binary lattices. (81g:82036)
Bardos, Claude (*with* Cessenat, M.) Spectre de l'opérateur de transport. (81f:45028)
Barrett, A. J. (*with* Pound, A.) Self-avoiding lattice walks with high coordination and small excluded volume. (81g:82069)
Blaisten-Barojas, E. *See* Okamura, Y.; et al., (81g:82065)
Cessenat, M. *See* Bardos, Claude, (81f:45028)
Conlon, Joseph G. A boundary value problem for the three-dimensional neutron transport equation. (81j:45017)
Cornille, Henri (*with* Gervois, Annie) Solutions de l'équation de Boltzmann linéarisée décroissant comme l'inverse de puissances de la vitesse dans le cas de la thermalisation des neutrons et de l'interaction de sphères dures. (English summary) (81k:82025)
Curtiss, C. F. *See* Thomas, James A., Jr., (81g:82032a) *and* Thomas, James A., Jr., (81g:82032b)
Di Blasio, Gabriella Global solutions of the kinetic equation for vehicular traffic in the low-density case. (81m:34080)
Ebersoldt, F. The positivity principle in Boltzmann-type equations. (81m:47070)
Fisch, Nathaniel (*with* Kruskal, Martin D.) Separating variables in two-way diffusion equations. (81m:35075)
Fujita, Shigeji *See* Okamura, Y.; et al., (81g:82065)
Funaki, Tadahisa Construction of a solution of random transport equation with boundary condition. (81h:60084)
Gervois, Annie *See* Cornille, Henri, (81k:82025)
Gol'din, V. Ja. (*with* Kolpakov, A. V.; Sokolov, A. V.) Methods for solving a system of stationary quasidiffusion equations. (Russian. English summary) (81b:65112)
Gorostiza, Luis G. (*with* Griego, Richard J.) Strong approximation of diffusion processes by transport processes. (81h:60102)
Griego, Richard J. *See* Gorostiza, Luis G., (81h:60102)
Guillaume, Jean-Louis *See* Valton, Michel; et al., (81k:82027)
Guseĭnov, G. Š. The scattering problem for an infinite Jacobi matrix. (Russian. Armenian and English summaries) (81k:47013)
Halbleib, J. A. (*with* Morel, J. E.) Adjoint Monte Carlo electron transport in the continuous-slowing-down approximation. (81a:65012)
Hänggi, P. Stochastic processes. II. Response theory and fluctuation theorems. (81c:82014)
Hively, G. A. On a class of nonlinear integral equations arising in transport theory. (81c:45009)
Hoffmann, Patrick *See* Valton, Michel; et al., (81k:82027)
Kolesničenko, A. V. Stefan-Maxwell relations and heat flow in higher approximations of transfer coefficients for partially ionized gas mixtures. (Russian) (81b:86007)
Kolpakov, A. V. *See* Gol'din, V. Ja.; et al., (81b:65112)
Kopelman, Raoul *See* Argyrakis, Panos, (81g:82036)
Kruskal, Martin D. *See* Fisch, Nathaniel, (81m:35075)
Kumar, Kailash (*with* Skullerud, H. R.; Robson, R. E.) Kinetic theory of charged particle swarms in neutral gases. (81j:82020)
Kuznecov, Ju. A. Symmetrization of approximation problems of transport theory. (Russian) (81c:65017)
Lakatos-Lindenberg, Katja *See* Seshadri, Venkita, (81i:60076)
(Landau, Lev D.) *See* Liflic, E. M.; et al., (81h:82001)
Liflic, E. M. (*with* Pitaevskiĭ, L. P.) ★Теоретическая физика ("Ландау-Лифшиц"). Том 10. (Russian) [Theoretical physics ("Landau-Liflic"). Vol. 10] (81h:82001)
Lobarev, I. V. *See* Agoškov, V. I., (81h:65138)
McCrory, Robert L. (*with* Orszag, Steven A.) Spectral methods for multidimensional diffusion problems. (81g:65135)
van der Mee, C. V. M. Spectral analysis of the transport equation. I. Nondegenerate and multigroup case. (81m:47075)
Morel, J. E. *See* Halbleib, J. A., (81a:65012)
Mörsch, M. *See* Risken, H.; et al., (81m:82010)
Nižnik, L. P. (*with* Tarasov, V. G.) Inverse scattering problem for a transport equation that is discrete in directions. (Russian) (81k:35162)
Okamura, Y. (*with* Blaisten-Barojas, E.; Fujita, Shigeji) Theory of atomic diffusion in cubic crystals with impurities based on the correlated-walks theory. (81g:82065)
Orszag, Steven A. *See* McCrory, Robert L., (81g:65135)
Owens, D. H. Spatial kinetics in nuclear reactor systems. (*See* 81m:93005)
Pao, C. V. Nonexistence of global solutions for an integro-differential system in reactor dynamics. (81h:45024)
Pitaevskiĭ, L. P. *See* Liflic, E. M., (81h:82001)
Pound, A. *See* Barrett, A. J., (81g:82069)
Pugh, D. (*with* Rai, S. N.) On the eigenfunctions of the Smoluchowski diffusion equation in a double-well potential and their relation to polymer dynamics. (81j:82005)
Rai, S. N. *See* Pugh, D., (81j:82005)
Risken, H. (*with* Vollmer, H. D.; Mörsch, M.) Matrix continued fraction solutions of the Kramers equation and their inverse friction expansions. (81m:82010)
Robson, R. E. *See* Kumar, Kailash; et al., (81j:82020)
Roger, Claudine *See* Valton, Michel; et al., (81k:82027)
Rubin, Robert J. *See* Weiss, George H., (81m:60135)
Salmon, J. Irreversibility, velocity correlations and non-Hamiltonian dynamics. (81f:82018)
Sancho, J. M. *See* San Miguel, M., (81j:82006)
San Miguel, M. (*with* Sancho, J. M.) A colored-noise approach to Brownian motion in position space. Corrections to the Smoluchowski equation. (81j:82006)
Sentis, Rémi Sur l'approximation d'un processus de transport par une diffusion. (English summary) (81h:60104)
Seshadri, Venkita (*with* Lakatos-Lindenberg, Katja) Extrema statistics of Wiener-Einstein processes in one, two, and three dimensions. (81i:60076)
Simons, S. Modified equations for heat conduction. (81m:80007)
Skullerud, H. R. *See* Kumar, Kailash; et al., (81j:82020)
Sokolov, A. V. *See* Gol'din, V. Ja.; et al., (81b:65112)
Suttorp, L. G. Kinetic theory of self-diffusion in a moderately dense one-component plasma. (81m:82032)
Tarasov, V. G. *See* Nižnik, L. P., (81k:35162)
Thomas, James A., Jr. (*with* Curtiss, C. F.) The transport properties of binary gas mixtures in applied magnetic fields. (81g:82032a)
(*with* Curtiss, C. F.) Evaluation of kinetic theory collision integrals using the generalized phase shift approach. (81g:82032b)
Valton, Michel (*with* Guillaume, Jean-Louis; Hoffmann, Patrick; Roger, Claudine) Une solution formelle de la hiérarchie B.B.G.K.Y. (Bogolioubov, Born, Green, Kirkwood, Yvon). (English summary) (81k:82027)
Vollmer, H. D. *See* Risken, H.; et al., (81m:82010)
Weiss, George H. (*with* Rubin, Robert J.) Internal configurations of span-constrained random walks. (81m:60135)

Yang, Ming Zhu (*with* Zhu, Guang Tian) The spectrum of transport operator with continuous energy in inhomogeneous medium with any cavity. **(81h:47017)**
Zhu, Guang Tian *See* **Yang, Ming Zhu, (81h:47017)**

82A75 Nuclear reactor theory

Busoni, Giorgio (*with* Frosali, Giovanni) A temperature-dependent nonlinear neutron transport problem. **81a:82065**
(*with* Frosali, Giovanni; Mangiarotti, Luigi) Some applications of functional analysis to problems of neutron transport. **81i:82078**
Dehesa, Jesús S. Orthogonal polynomials in transport theories. **81m:82050**
El Wakil, S. A. (*with* Haggag, M. H.) Asymptotic solution to the reflected critical slab. **81c:82035**
Frosali, Giovanni *See* **Busoni, Giorgio, 81a:82065** *and* **Busoni, Giorgio; et al., 81i:82078**
Haggag, M. H. *See* **El Wakil, S. A., 81c:82035**
Ilamed, Yehiel (*with* Lemanska, Miriam) On exponential and polynomial space-time dependent solutions of the monoenergetic neutron transport equation. **81m:82051**
Karnick, H. *See* **Sengupta, A., 81b:82012**
Lemanska, Miriam *See* **Ilamed, Yehiel, 81m:82051**
Mangiarotti, Luigi *See* **Busoni, Giorgio; et al., 81i:82078**
Sengupta, A. (*with* Karnick, H.) Analysis of the neutron slowing down equation. **81b:82012**
Yang, Ming Zhu (*with* Zhu, Guang Tian) Multigroup theory for neutron transport. **81e:82074**
Zhu, Guang Tian *See* **Yang, Ming Zhu, 81e:82074**

secondary classifications:

Busoni, Giorgio Nonhomogeneous boundary conditions in evolution problems. (Italian summary) **(81j:45016)**

82A77 Mathematically heuristic statistical physics (must also be assigned at least one other classification number in this section)

Hangelbrock, R. J. Derivation of formulas relevant to neutron transport in media with anisotropic scattering. **81i:82079**
Mika, Stanislav On the approximate solution of the multigroup time-dependent transport equation by P_L-method. (Czech and Russian summaries) **81j:82039**
Watanabe, Toltsu Asymptotic behavior of average number of neutron's collisions. **81k:82070**

secondary classifications:

Brietzke, Eduardo (*with* Nowosad, Pedro) Existence of optimal distribution of fuel in nuclear reactors. **(81i:49032)**
Kaščenko, M. P. *See* **Vereščagin, V. P., (81i:82031)**
Maradudin, Alexei A. (*with* Mazur, Paul) Effects of surface roughness on the van der Waals force between macroscopic bodies. **(81h:82041)**
Marek, Ivo Homogenization in problems with oscillating data. **(81k:46077)**
Mazur, Paul *See* **Maradudin, Alexei A., (81h:82041)**
Nowosad, Pedro *See* **Brietzke, Eduardo, (81i:49032)**
Vereščagin, V. P. (*with* Kaščenko, M. P.) Markov form of the nonequilibrium statistical operator for systems with weak interaction. (Russian. English summary) **(81i:82031)**

82A99 Miscellaneous topics

Belov, N. V. *See* **Soldatov, E. A.; et al., 81a:82066a**; **Soldatov, E. A.; et al., 81a:82066b** *and* **Soldatov, E. A.; et al., 81a:82066c**
Drozdov, Ju. N. *See* **Soldatov, E. A.; et al., 81a:82066c**
Grečuninkov, V. N. *See* **Soldatov, E. A.; et al., 81a:82066a**
Iljuhin, V. V. *See* **Soldatov, E. A.; et al., 81a:82066a**; **Soldatov, E. A.; et al., 81a:82066b** *and* **Soldatov, E. A.; et al., 81a:82066c**
Jahno, V. G. *See* **Vasil'ev, V. A.; et al., 81f:82046**
Kuz'min, È. A. *See* **Soldatov, E. A.; et al., 81a:82066a**; **Soldatov, E. A.; et al., 81a:82066b** *and* **Soldatov, E. A.; et al., 81a:82066c**
McDonald, J. F. Some mathematically simple ensembles of random matrices which represent Hamiltonians with a small time-reversal-noninvariant part. (Italian and Russian summaries) **81e:82075**
Romanovskiĭ, Ju. M. *See* **Vasil'ev, V. A.; et al., 81f:82046**
Soldatov, E. A. (*with* Grečušnikov, V. N.; Iljuhin, V. V.; Kuz'min, È. A.; Belov, N. V.) The possibility of decomposition of a complex multidimensional function into its components. (Russian) **81a:82066a**
(*with* Kuz'min, È. A.; Iljuhin, V. V.; Belov, N. V.) A new algebraic approach to the decomposition of a one-dimensional function into a sum of exponential functions. (Russian) **81a:82066b**
(*with* Drozdov, Ju. N.; Iljuhin, V. V.; Kuz'min, È. A.; Belov, N. V.) On the determination of coefficients of the characteristic equation in the problem of decomposition of a noise-distorted function into a sum of exponential functions. (Russian) **81a:82066c**
Vasil'ev, V. A. (*with* Romanovskiĭ, Ju. M.; Jahno, V. G.) Autowave processes in distributed kinetic systems. **81f:82046**

secondary classifications:

Alhassid, Y. (*with* Levine, R. D.) Collision experiments with partial resolution of final states: maximum entropy procedure and surprisal analysis. **(81a:81102)**
Enting, I. G. *See* **Kim, D., (81b:05047)**
Kim, D. (*with* Enting, I. G.) The limit of chromatic polynomials. **(81b:05047)**
Levine, R. D. *See* **Alhassid, Y., (81a:81102)**
Peierls, Rudolf ★Surprises in theoretical physics. **(81g:81002)**

83–XX RELATIVITY

83–01 Elementary exposition, textbooks

Arcidiacono, Giuseppe ★Relatività e cosmologia. Vol. I. (Italian) [Relativity and cosmology. Vol. I] **81m:83001a**
★Relatività e cosmologia. Vol. II. (Italian) [Relativity and cosmology. Vol. II] **81m:83001b**
(Bondarev, A. P.) *See* **Lightman, Alan P.; et al., 81f:83001**
Clarke, C. J. S. ★Elementary general relativity. **81h:83001**
van Dam, H. *See* **Staunton, L. P., 81j:83002**
(Danilov, Ju. A.) *See* **Lightman, Alan P.; et al., 81f:83001**
Dodson, C. T. J. ★Categories, bundles and spacetime topology. **81i:83001**
(Halatnikov, I. M.) *See* **Lightman, Alan P.; et al., 81f:83001**
(Ivančika, I. I.) *See* **Utiyama, Ryōuyū, 81d:83002**
Ivanickaja, O. S. ★Лоренцев базис и гравитационные эффекты в Эйнштейновой теории тяготения. (Russian) [The Lorentz basis and gravitational effects in Einstein's gravitation theory] **81k:83001**
Lightman, Alan P. (*with* Press, William H.; Price, Richard H.; Teukolsky, Saul A.) ★Сборник задач по теории относительности и гравитации. (Russian) [Problem book in relativity and gravitation] **81f:83001**
Press, William H. *See* **Lightman, Alan P.; et al., 81f:83001**
Price, Richard H. *See* **Lightman, Alan P.; et al., 81f:83001**
Staunton, L. P. (*with* van Dam, H.) Graphical introduction to the special theory of relativity. **81j:83002**
Stephani, Hans ★Allgemeine Relativitätstheorie. (German) [General theory of relativity] **81d:83001**
Teukolsky, Saul A. *See* **Lightman, Alan P.; et al., 81f:83001**
Utiyama, Ryōuyū ★Теория относительности. (Russian) [Theory of relativity] **81d:83002**

secondary classifications:

Mac Lane, Saunders Mathematical models of space. **(81d:51001)**
Sexl, Hannelore *See* **Sexl, Roman U., (81b:85001)**
Sexl, Roman U. (*with* Sexl, Hannelore) ★White dwarfs—black holes. **(81b:85001)**
(Weidhaas, Patrick P.) *See* **Sexl, Roman U.; et al., (81b:85001)**

83–02 Advanced exposition (research surveys, monographs, etc.)

Eguchi, Tohru (*with* Gilkey, Peter B.; Hanson, Andrew J.) Gravitation, gauge theories and differential geometry. **81m:83002**
Ehlers, Jürgen Einstein's theory of gravitation. **81g:83001**
Gilkey, Peter B. *See* **Eguchi, Tohru; et al., 81m:83002**
Hanson, Andrew J. *See* **Eguchi, Tohru; et al., 81m:83002**
d'Inverno, R. A. A review of algebraic computing in general relativity. **81m:83003**

secondary classifications:

Stephani, Hans ★Allgemeine Relativitätstheorie. (German) [General theory of relativity] **(81d:83001)**

83–03 Historical (must also be assigned at least one classification number from Section 01)

(Čobanov, Ivan) *See* **Zel'dovič, Ja. B., 81a:83001**
Hörz, Herbert Philosophical concepts of space and time. (*See* **81k:01053**)
Janich, Peter Die erkenntnistheoretischen Quellen Einsteins. **81h:83002**
Kurşunoğlu, Behram A non-technical history of the generalized theory of gravitation dedicated to the Albert Einstein centennial. (*See* **81k:83003**)
Sarangov, C. S. The role of analogy in the beginning of general relativity. (Russian. English summary) **81k:83002**
Zahar, Elie G. The mathematical origins of general relativity and of unified field theories. **81m:83004**
Zel'dovič, Ja. B. The great physicist and his work. (Bulgarian) **81a:83001**

secondary classifications:

(Aichelburg, Peter C.) *See* **Albert Einstein: his influence on physics, philosophy and politics, (81f:01039)**
Bergia, Silvio Einstein and the birth of special relativity. (*See* **81k:01053**)
Bergmann, Peter G. The development of the theory of relativity. (*See* **81f:01039**)
Bondi, Hermann Relativity theory and gravitation. (*See* **81k:01053**)
Born, Max Recollections of Einstein. (Bulgarian) **(81d:01020)**
Dürr, H.-P. Heisenberg's unified theory of elementary particles and the structure of time and space. **(81m:81001)**
Earman, John (*with* Glymour, Clark) The gravitational red shift as a test of general relativity: history and analysis. **(81j:01029)**
(Einstein, Albert) *See* **Yang, Chen Ning, (81c:81001)**; **Born, Max, (81d:01020)**; **Albert Einstein: his influence on physics, philosophy and politics, (81f:01039)**; **Einstein, (81k:01053)**; **Licis, N. A.; et al., (81m:01036)**; **Georgiev, Georgi Iv., (81m:01051)**; **Tonnelat, Marie Antoinette, (81m:01080)** *and* **Collection: Einstein, (81m:01095)**
(Frankfurt, U. I.) *See* **Collection: Einstein, (81m:01095)**
French, Anthony Philip The story of general relativity. (*See* **81k:01053**)
See also **Einstein, (81k:01053)**
Georgiev, Georgi Iv. Albert Einstein and the development of differential geometry. (Romanian) **(81m:01051)**
(Ginzburg, V. L.) *See* **Collection: Einstein, (81m:01095)**
Glymour, Clark *See* **Earman, John, (81j:01029)**
Gray, Jeremy J. ★Ideas of space. **(81k:01018)**
(Kuznecov, B. G.) *See* **Collection: Einstein, (81m:01095)**

Licis, N. A. (*with* Markov, V. A.) Lobačevskiĭ and Einstein. Sources of the general theory of relativity. (Russian) **(81m:01036)**
(Lobačevskiĭ, N. I.) *See* **Licis, N. A.; et al., (81m:01036)**
Markov, V. A. *See* **Licis, N. A., (81m:01036)**
(McGilvray, L) *See* **Tonnelat, Marie Antoinette, (81m:01080)**
Metropolis, N. The MANIAC. (*See* **81i:68002)**
Moyer, Donald Franklin Revolution in science: the 1919 eclipse test of general relativity. (*See* **81k:83003)**
Schöpf, Hans-Georg Ehrenpromotion für Prof. Dr. Peter Gabriel Bergmann. **(81j:01042)**
(Sexl, Roman U.) *See* **Albert Einstein: his influence on physics, philosophy and politics, (81f:01039)**
Tonnelat, Marie Antoinette Einstein, mythe et réalité. **(81m:01080)**
(Tsevrenis, S.) *See* **Tonnelat, Marie Antoinette, (81m:01080)**
(Vačov, D.) *See* **Born, Max, (81d:01020)**
Yang, Chen Ning Einstein's impact on theoretical physics. **(81c:81001)**
Anniversary:
Birth of Albert Einstein ★Einstein. **(81k:01053)**
Collection:
Einstein ★Эйнштейновский сборник, 1977. (Russian) [Einstein collection, 1977] **(81m:01095)**
Einstein ★Einstein. **(81k:01053)**
Albert Einstein: his influence on physics, philosophy and politics ★Albert Einstein: his influence on physics, philosophy and politics. **(81f:01039)**

83–04 Explicit machine computation and programs (not the theory of computation or programming)

secondary classifications:

Piran, Tsvi Numerical codes for cylindrical general relativistic systems. **(81g:83024)**

83–05 Experimental papers

83–06 Proceedings, conferences, etc.

(Basov, N. G.) *See* **Problems in the general theory of relativity and theory of group representations, 81i:83004**
(Edwards, Cyril) *See* **Gravitational radiation, collapsed objects and exact solutions, 81i:83003**
(Einstein, Albert) *See* **Symposium: Einstein, 81e:83001; General relativity and gravitation, 81h:83003; General relativity, 81i:83002** *and* **On the path of Albert Einstein, 81k:83003**
(Freedman, Daniel Z.) *See* **Supergravity, 81j:83001**
(Giacconi, Riccardo) *See* **Physics and astrophysics of neutron stars and black holes, 81k:83004**
(Hawking, S. W.) *See* **General relativity, 81i:83002**
(Held, Alan) *See* **General relativity and gravitation, 81h:83003**
(Hermann, Armin) *See* **Symposium: Einstein, 81e:83001**
(Israel, W.) *See* **General relativity, 81i:83002**
(Kuryunoğlu, Behram) *See* **On the path of Albert Einstein, 81k:83003**
(Marlow, A. R.) *See* **Quantum theory and gravitation, 81d:83003**
(Mason, Alan) *See* **Problems in the general theory of relativity and theory of group representations, 81i:83004**
(Nelkowski, H.) *See* **Symposium: Einstein, 81e:83001**
(van Nieuwenhuizen, P.) *See* **Supergravity, 81j:83001**
(Perlmutter, Arnold) *See* **On the path of Albert Einstein, 81k:83003**
(Poser, Hans) *See* **Symposium: Einstein, 81e:83001**
(Ruffini, Remo) *See* **Physics and astrophysics of neutron stars and black holes, 81k:83004**
(Schrader, Robert) *See* **Symposium: Einstein, 81e:83001**
(Scott, Linda F.) *See* **On the path of Albert Einstein, 81k:83003**
(Seiler, R.) *See* **Symposium: Einstein, 81e:83001**
Anniversary:
Birth of Albert Einstein ★Einstein Symposion, Berlin. (German) **81e:83001**
★General relativity. **81i:83002**
Berlin ★Einstein Symposion, Berlin. (German) **81e:83001**
General relativity ★General relativity. **81i:83002**
General relativity and gravitation ★General relativity and gravitation. Vol. 1. **81h:83003**
Gravitation ★Quantum theory and gravitation. **81d:83003**
Gravitational radiation, collapsed objects and exact solutions ★Gravitational radiation, collapsed objects and exact solutions. **81i:83003**
New Orleans, La. ★Quantum theory and gravitation. **81d:83003**
On the path of Albert Einstein ★On the path of Albert Einstein. **81k:83003**
Perth ★Gravitational radiation, collapsed objects and exact solutions. **81i:83003**
Physics and astrophysics of neutron stars and black holes ★Physics and astrophysics of neutron stars and black holes. **81k:83004**
Problems in the general theory of relativity and theory of group representations
★Problems in the general theory of relativity and theory of group representations. **81i:83004**
Proceedings of the International School of Physics "Enrico Fermi" ★Physics and astrophysics of neutron stars and black holes. **81k:83004**
Proceedings of the P. N. Lebedev Physics Institute ★Problems in the general theory of relativity and theory of group representations. **81i:83004**
Quantum theory and gravitation ★Quantum theory and gravitation. **81d:83003**
Stony Brook, N.Y. ★Supergravity. **81j:83001**
Summer School:
Einstein Centenary ★Gravitational radiation, collapsed objects and exact solutions. **81i:83003**
Supergravity ★Supergravity. **81j:83001**
Symposium:
Einstein ★Einstein Symposion, Berlin. (German) **81e:83001**
Quantum Theory and Gravitation ★Quantum theory and gravitation. **81d:83003**
Varenna ★Physics and astrophysics of neutron stars and black holes. **81k:83004**
Workshop:
Supergravity ★Supergravity. **81j:83001**

secondary classifications:

(Aichelburg, Peter C.) *See* **Albert Einstein: his influence on physics, philosophy and politics, (81f:01039)**
(Bazarov, I. P.) *See* **History and methodology of the natural sciences, (81i:01002)**
(Einstein, Albert) *See* **Albert Einstein: his influence on physics, philosophy and politics, (81f:01039)**
(Gordeev, D. I.) *See* **History and methodology of the natural sciences, (81i:01002)**
(Levšin, L. V.) *See* **History and methodology of the natural sciences, (81i:01002)**
(Sexl, Roman U.) *See* **Albert Einstein: his influence on physics, philosophy and politics, (81f:01039)**
Albert Einstein: his influence on physics, philosophy and politics ★Albert Einstein: his influence on physics, philosophy and politics. **(81f:01039)**
History and methodology of the natural sciences ★История и методология естественных наук. Вып. XXII: Физика. (Russian) [History and methodology of the natural sciences. No. XXII: Physics] **(81i:01002)**
Physics ★История и методология естественных наук. Вып. XXII: Физика. (Russian) [History and methodology of the natural sciences. No. XXII: Physics] **(81i:01002)**

83A05 Special relativity

Abdel-Megied, M. (*with* Abdel-Tawab, Y.) The time topology on Minkowski space. (Arabic summary) **81i:83005**
Abdel-Tawab, Y. *See* **Abdel-Megied, M., 81i:83005**
Allcock, G. R. Synge's triads of null rays. **81d:83004**
Antippa, Adel F. *See* **Marchildon, L.; et al., 81a:83003**
Baylis, W. E. Special relativity with 2×2 matrices. **81i:83006**
Beem, John K. Proper homothetic maps and fixed points. **81k:83005**
Boltjanskiĭ, V. G. Anisotropic theory of relativity and optimality. (Russian) **81a:83002**
Bosch, Jorge E. Toward a concept of scientific theory through special relativity. **81g:83002**
Boyer, Timothy H. Thermal effects of acceleration through random classical radiation. **81c:83001**
Brecher, K. *See* **Caporaso, G., 81c:83002**
Brigninshaw, A. J. Causality and the group structure of space-time. **81f:83002**
The conformal geometry of Minkowski space: hyperbolic world lines. **81d:83005**
Bugajska, Krystyna Geometrical interpretation of spinors. **81d:83006**
Caporaso, G. (*with* Brecher, K.) Must ultrabaric matter be superluminal? **81c:83002**
Cole, E. A. B. Comments on the use of three time dimensions in relativity. **81j:83003**
Corum, James F. Relativistic covariance and rotational electrodynamics. **81k:83006**
Costa de Beauregard, Olivier Collapse du Ψ et covariance relativiste. (English summary) **81m:83005**
Coulter, Byron L. Relativistic motion in a plane. **81e:83002**
Dasgupta, Anjan Kumar Probability of events in special relativistic sense. **81e:83003**
Everett, Allen E. *See* **Marchildon, L.; et al., 81a:83003**
Giambò, Sebastiano (*with* Palumbo, Annunziata) Sur l'équation de transport pour une onde simple en relativité restreinte. (English summary) **81d:83007**
Gluckman, Albert G. Some kinematical characterizations of the Voigt coordinate transformations. **81f:83003a**
Some kinematical characterizations of the Voigt coordinate transformations. II. **81f:83003b**
Godfrey-Smith, William Special relativity and the present. **81g:83003**
González Gascón, F. Open problems concerning special relativity, long range fields of force and nonlinear partial differential equations. (Italian summary) **81c:83003**
Hellsten, H. Visual geometry and the algebraic properties of spinors. **81i:83007**
Joseph, Geoffrey Geometry and special relativity. **81j:83004**
Jumarie, Guy A subjectivistic calculus. **81f:83004**
Landsberg, Peter T. Thought experiment to determine the special relativistic temperature transformation. **81e:83004**
Lemke, H. Generalized macrocausality in relativity theory. **81i:83008**
Liebscher, Dierck-Ekkehard ★Relativitätstheorie mit Zirkel und Lineal. (German) [The theory of relativity with ruler and compasses] **81i:83009a**
★Теория относительности с циркулем и линейкой. (Russian) [The theory of relativity with ruler and compasses] **81i:83009b**
Marchildon, L. (*with* Everett, Allen E.; Antippa, Adel F.) Electrodynamics and tachyons. (Italian and Russian summaries) **81a:83003**
(Markevič, V. E.) *See* **Liebscher, Dierck-Ekkehard, 81i:83009b**
McKinley, John M. Relativistic transformation of solid angle. **81e:83005**
Mercheş, I. A constrained minimum energy problem in relativistic magnetofluid dynamics. (French summary) **81j:83005**
(Mickevič, N. V.) *See* **Liebscher, Dierck-Ekkehard, 81i:83009b**
Palumbo, Annunziata *See* **Giambò, Sebastiano, 81d:83007**
Pappas, P. T. On velocity and the transverse Doppler effect in the six-dimensional space. A hidden-variable model? **81i:83010**
Pavšič, M. Introducing the dilatational degree of freedom: special relativity in V_6. **81d:83008**
Podlaha, M. F. On the impossibility to measure one-way velocity of light (complementary remarks to T. Sjödin's paper [83005 above]). **81f:83006**
Santilli, Ruggero Maria On a possible Lie-admissible covering of the Galilei relativity in Newtonian mechanics for nonconservative and Galilei form-noninvariant systems. **81g:83004a**
Addendum to: "On a possible Lie-admissible covering of the Galilei relativity in Newtonian mechanics for nonconservative and Galilei form-noninvariant systems". **81g:83004b**

Sen, D. K. The special-relativistic velocity-addition law and a related functional equation. **81a:83004**
Sjödin, T. Synchronization in special relativity and related theories. (Italian and Russian summaries) **81f:83005**
Stazi, Luigi On the relativistic kinematics of the deformations of a three-dimensional continuum. (Italian. English summary) **81d:83009**
Teli, M. T. Quaternionic form of unified Lorentz transformations. **81m:83006**
(Treder, Hans-Jürgen) *See* **Liebscher, Dierck-Ekkehard, 81i:83009a** *and* **Liebscher, Dierck-Ekkehard, 81i:83009b**
Urbantke, H. On rotating plane-fronted waves and their Poincaré-invariant differential geometry. **81c:83004**
Weinberg, N. N. On some generalizations of the Lorentz transformation. **81m:83007**

secondary classifications:

Berezin, A. V. (*with* Tolkačev, E. A.; Fedorov, F. I.) The Lorentz transformations and the equations for spinorial quaternions. (Russian. English summary) **81f:81031**
van Dam, H. *See* **Staunton, L. P., (81j:83002)**
Dattoli, G. (*with* Mignani, R.) Formulation of electromagnetism in a six-dimensional space-time. **(81j:78003)**
Dominici, D. (*with* Gomis, J.; Longhi, G.) A possible approach to the two-body relativistic problem. (Italian and Russian summaries) **(81g:70016)**
Fedorov, F. I. *See* **Berezin, A. V.; et al., (81f:81031)**
Giachetti, R. (*with* Sorace, E.) Relativistic two-body interactions: a Hamiltonian formulation. **(81d:70014)**
Gomis, J. *See* **Dominici, D.; et al., (81g:70016)**
González Gascón, F. (*with* Moreno-Insertis, F.; Rodríguez-Camino, E.) The inverse problem of nonlinear dynamical systems: a constructive approach. **(81j:34021)**
Greenspan, Donald Arithmetic modeling in applied mathematics. **(81m:65014)**
Healy, W. P. Path-dependent Lagrangians in relativistic electrodynamics. **(81e:78015)**
Hughston, Lane Palmer ★Twistors and particles. **(81e:81173)**
Ionescu-Pallas, Nicholas (*with* Sofonea, Liviu) Time spending and space exploring in the framework of special relativity theory. (French summary) **(81i:83037)**
Jánossy, L. (*with* van der Merwe, A. J.; Yourgrau, Wolfgang) On the mode of propagation of light. (German summary) **(81f:83007)**
Lester, J. A. A characterization of non-Euclidean non-Minkowskian inner product space isometries. **(81f:51014)**
Levaiev, A. E. ★Движение и двойственность в релятивистской электродинамике. (Russian) [Motion and duality in relativistic electrodynamics] **(81e:78002)**
Longhi, G. *See* **Dominici, D.; et al., (81g:70016)**
van der Merwe, A. J. *See* **Jánossy, L.; et al., (81f:83007)**
Mignani, R. *See* **Dattoli, G., (81j:78003)**
Moreno-Insertis, F. *See* **González Gascón, F.; et al., (81j:34021)**
Nanda, Sribatsa A-topology for Minkowski space. **(81d:51003)**
A note on maximal and minimal causal spaces. **(81d:51004)**
Radó, F. On the characterization of affine isometries. **(81e:51007)**
Rinke, Max The relation between relativistic strings and Maxwell fields of rank 2. **(81e:78016)**
Rodríguez-Camino, E. *See* **González Gascón, F.; et al., (81j:34021)**
Rosen, Nathan (*with* Szamosi, G.) Classical particles with unusual properties. **(81d:81143)**
Rouxel, Bernard Sur les courbes isotropes, pseudo-isotropes et les surfaces isotropes d'un espace temps de Minkowski M^4. **(81j:53017)**
Schröder, Eberhard M. Zur Kennzeichnung der Lorentz-Transformationen. (English summary) **(81b:53022)**
Sofonea, Livia *See* **Ionescu-Pallas, Nicholas, (81i:83037)**
Sommers, Paul Space spinors. **(81k:81050)**
Sorace, E. *See* **Giachetti, R., (81d:70014)**
Staunton, L. P. (*with* van Dam, H.) Graphical introduction to the special theory of relativity. **(81j:83002)**
Szamosi, G. *See* **Rosen, Nathan, (81d:81143)**
Tod, Paul Some symplectic forms arising in twistor theory. **(81i:83040)**
Tolkačev, E. A. *See* **Berezin, A. V.; et al., (81f:81031)**
Vanhecke, Lieven Quelques propriétés concernant des systèmes de droites dans un espace de Minkowski M^4. **(81c:53019)**
Yourgrau, Wolfgang *See* **Jánossy, L.; et al., (81f:83007)**

83B05 Observational and experimental questions

Azbel, M. Ya. The influence of the universe on orbital motion. **81k:83007**
Braginskiĭ, V. B. *See* **Douglass, D. H., (See 81i:83002)**
Codina, J. M. (*with* Graells, J.; Martín, C.) Electromagnetic phenomena induced by weak gravitational fields. Foundations for a possible gravitational wave detector. **81d:83010**
Douglass, D. H. (*with* Braginskiĭ, V. B.) Gravitational-radiation experiments. (*See* **81i:83002**)
Graells, J. *See* **Codina, J. M.; et al., 81d:83010**
Jánossy, L. (*with* van der Merwe, A. J.; Yourgrau, Wolfgang) On the mode of propagation of light. (German summary) **81f:83007**
Laymon, Ronald Independent testability: the Michelson-Morley and Kennedy-Thorndike experiments. **81m:83008**
Martín, C. *See* **Codina, J. M.; et al., 81d:83010**
van der Merwe, A. J. *See* **Jánossy, L.; et al., 81f:83007**
Stanjukovič, K. P. Transformation of coordinates, interval and the principle of correspondence. (Russian) **81h:83004**
Stoeger, William R. (*with* Yasskin, Philip B.) Can a macroscopic gyroscope feel torsion? **81d:83011**
Treder, Hans-Jürgen Die relativistische Vergrößerung des scheinbaren Sonnenradius. (English summary) **81c:83005**
Unruh, W. G. Quantum nondemolition. **81k:83008**
Will, Clifford M. The confrontation between gravitation theory and experiment. (*See* **81i:83002**)
Yasskin, Philip B. *See* **Stoeger, William R., 81d:83011**
Yourgrau, Wolfgang *See* **Jánossy, L.; et al., 81f:83007**
Zahar, Elie G. Einstein, Meyerson and the role of mathematics in physical discovery. **81j:83006**

secondary classifications:

Bekenstein, Jacob D. (*with* Meisels, Amnon) Conformal invariance, microscopic physics, and the nature of gravitation. **(81h:83035)**
Borisova, L. B. (*with* Vladimirova, L. F.) Monadic criteria of gravitational-inertial waves; the effect of gravitational-inertial waves of various types on the detector. (Russian) **(81c:83019)**
Börner, G. (*with* Schlieder, S.) Some remarks concerning the equivalence principle of general relativity with respect to quantum mechanical one-particle state. **(81d:83012)**
Cooperstock, F. I. (*with* Hobill, D. W.) Detection of relative motion in a gravitational field. **(81i:83035)**
Hobill, D. W. *See* **Cooperstock, F. I., (81i:83035)**
Landsberg, Peter T. Thought experiment to determine the special relativistic temperature transformation. **(81e:83004)**
Lemke, H. Generalized macrocausality in relativity theory. **(81i:83008)**
Meisels, Amnon *See* **Bekenstein, Jacob D., (81h:83035)**
Moyer, Donald Franklin Revolution in science: the 1919 eclipse test of general relativity. (*See* **81k:83003**)
Press, William H. (*with* Vishniac, Ethan T.) Tenacious myths about cosmological perturbations larger than the horizon size. **(81g:83071)**
Schlieder, S. *See* **Börner, G., (81d:83012)**
(Smarr, Larry L.) *See* **Sources of gravitational radiation, (81j:83017)**
Vishniac, Ethan T. *See* **Press, William H., (81g:83071)**
Vladimirova, L. F. *See* **Borisova, L. B., (81c:83019)**
Yilmaz, Hüseyin Experiments in quantum gravity. **(81h:83024)**
Gravitational radiation ★Sources of gravitational radiation. **(81j:83017)**
Seattle, Wash. ★Sources of gravitational radiation. **(81j:83017)**
Sources of gravitational radiation ★Sources of gravitational radiation. **(81j:83017)**
Workshop:
Sources of Gravitational Radiation ★Sources of gravitational radiation. **(81j:83017)**

83Cxx General relativity

Hawking, S. W. (*with* Israel, W.) Introductory survey. (*See* **81i:83002**)
Israel, W. *See* **Hawking, S. W., (See 81i:83002)**
Penrose, Roger The geometry of the universe. (*See* **80b:00007**)
York, James W., Jr. Kinematics and dynamics of general relativity. (*See* **81j:83017**)

secondary classifications:

Arcidiacono, Giuseppe ★Relatività e cosmologia. Vol. I. (Italian) [Relativity and cosmology. Vol. I] **(81m:83001a)**
★Relatività e cosmologia. Vol. II. (Italian) [Relativity and cosmology. Vol. II] **(81m:83001b)**
(Einstein, Albert) *See* **General relativity, (81i:83002)**
(Hawking, S. W.) *See* **General relativity, (81i:83002)**
(Israel, W.) *See* **General relativity, (81i:83002)**
Stephani, Hans ★Allgemeine Relativitätstheorie. (German) [General theory of relativity] **(81d:83001)**
Anniversary:
Birth of Albert Einstein ★General relativity. **(81i:83002)**
General relativity ★General relativity. **(81i:83002)**

83C05 Einstein's equations

Antonov, V. I. (*with* Efremov, V. N.; Vladimirov, Ju. S.) Monad method and canonical formalism of general relativity. **81k:83009**
Belinskiĭ, V. A. (*with* Zaharov, V. E.) The integration of Einstein's equations, by the method of inverse scattering, and exact soliton solutions. (*See* **81j:83017**)
Börner, G. (*with* Schlieder, S.) Some remarks concerning the equivalence principle of general relativity with respect to quantum mechanical one-particle state. **81d:83012**
Carlson, George T., Jr. (*with* Safko, John L.) Matching of the plane symmetric static and homogeneous vacuum solutions of the Einstein field equations. **81g:83005**
Ceitlin, A. A. *See* **Ponomarev, V. N., 81g:83007**
Efremov, V. N. *See* **Antonov, V. I.; et al., 81k:83009**
Fischer, Arthur E. (*with* Marsden, Jerrold E.) The initial value problem and the dynamical formulation of general relativity. (*See* **81i:83002**)
Fischer, Elliot Similarity solutions of the Einstein and Einstein-Maxwell equations. **81a:83005**
Gass, N. Solution of Einstein's gravitational field equations by the finite element method. (German and Russian summaries) **81e:83006**
Gautreau, R. On Kruskal-Novikov coordinate systems. (Italian and Russian summaries) **81e:83007**
Goenner, Hubert F. On the equivalence of the Palatini and Hilbert methods of variation. **81i:83011**
Gürsey, Feza (*with* Jafarizadeh, M. A.; Tze, H. C.) Quaternionic multi $S^4 \approx HP(1)$ gravitational and chiral instantons. **81c:83006**
Horowitz, Gary T. Semiclassical relativity: the weak-field limit. **81a:83006**
Jafarizadeh, M. A. *See* **Gürsey, Feza; et al., 81c:83006**
Macedo, A. (*with* Som, M. M.) The Lewis metric and flat space-time. **81a:83007**
Mariwalla, K. H. Uniqueness of classical and relativistic systems. **81i:83012**
Marsden, Jerrold E. *See* **Fischer, Arthur E., (See 81i:83002)**
Mittelstaedt, Peter Der Dualismus von Feld und Materie in der allgemeinen Relativitätstheorie. **81g:83006**

Moncrief, Vincent The branching of solutions of Einstein's equations. **81i:83013**
Penrose, Roger On the twistor descriptions of massless fields. **81h:83005**
Ponomarev, V. N. (*with* Ceĭtlin, A. A.) A variational principle in general relativity. (Russian) **81g:83007**
Safko, John L. *See* **Carlson, George T., Jr., 81g:83005**
Schleder, S. *See* **Börner, G., 81d:83012**
Smallwood, J. The Cauchy problem in general relativity. III. On locally imbedding a family of null hypersurfaces. **81k:83010**
Smarr, Larry L. Basic concepts in finite differencing of partial differential equations. (*See* **81j:83017**)
Sen, M. M. *See* **Macedo, A., 81a:83007**
Spinelli, Giancarlo Gravitational field theory for the continuum: second order field equations. (Italian summary) **81e:83008**
Temčin, A. N. Lanczos-transformed Einstein equations. (Russian) **81k:83011**
Tomonaga, Yasurô On Einstein's field equations. **81c:83007**
Treder, Hans-Jürgen Singularitäten in der Allgemeinen Relativitätstheorie. (English summary) **81d:83013**
Tze, H. C. *See* **Gürsey, Feza; et al., 81c:83006**
Vladimirov, Ju. S. *See* **Antonov, V. I.; et al., 81k:83009**
Zaharov, V. E. *See* **Belinskiĭ, V. A.,** (*See* **81j:83017**)

secondary classifications:

Babičev, L. F. (*with* Kuvšinov, V. I.; Fedorov, F. I.) First-order equations in the theory of gauge supersymmetry. (Russian. English summary) **(81a:83008)**
Bogojavlenskiĭ, O. I. Homogeneous solutions of the Einstein equations. **(81m:58050)**
Caianiello, E. R. Some remarks on quantum mechanics and relativity. **(81e:81010)**
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Kreisel, Eckhard Einsteins Feldtheorie mit Fernparallelismus und Diracs Elektrodynamik. II. Identitäten und Erhaltungssätze. (English summary) **(81g:83050)**
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Carmeli, M. (*with* Charach, Ch.) Inhomogeneous generalization of some Bianchi models. **81m:83047**

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secondary classifications:

Aliev, A. N. (*with* Gal'cov, D. V.; Sokolov, A. A.) Rotating black hole in a strong magnetic field. (Russian) **(81g:83010)**

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Arcidiacono, Giuseppe ★Relatività e cosmologia. Vol. I. (Italian) [Relativity and cosmology. Vol. I] **(81m:83001a)**
★Relatività e cosmologia. Vol. II. (Italian) [Relativity and cosmology. Vol. II] **(81m:83001b)**

Bičák, J. On the theories of the interacting perturbations of the Reissner-Nordström black hole. **(81g:83016)**

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Datta, Bidyut Kumar Initial value problems in general relativity and their singularities. **(81d:83019)**

Demaret, Jacques On Wheeler's "rule of unanimity" in quantum cosmology. **(81d:83031)**

Dhurandhar, S. V. (*with* Vishveshwara, C. V.; Cohen, Jeffrey M.) Electromagnetic fields in space-times with local rotational symmetry. **(81g:83036)**

Dodson, C. T. J. (*with* Sulley, L. J.) On bundle completion of parallelizable manifolds. **(81f:53048)**

Einhorn, Martin B. (*with* Stein, D. L.; Toussaint, Doug) Are grand unified theories compatible with standard cosmology? **(81e:81132)**

Ferraris, Marco (*with* Francaviglia, Mauro) An algebraic isometric embedding of Kruskal space-time. **(81c:53055)**

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Galloway, Gregory J. A generalization of Myers' theorem and an application to relativistic cosmology. **(81i:53049)**

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Gunter, D. L. A study of the coupled gravitational and electromagnetic perturbations to the Reissner-Nordström black hole: the scattering matrix, energy conversion, and quasi-normal modes. **(81e:83022)**

Gürses, Metin Cosmological $f-g$ fields relevant to quark confinement. **(81d:81109)**

Ionescu-Pallas, Nicholas (*with* Sofonea, Liviu) New approach to gravitation and cosmology. (French summary) **(81c:83035)**

Iranzo, V. (*with* Lapiedra, R.) Classical predictive electrodynamics in a conformally flat universe. The case of the Einstein-de Sitter universe. **(81e:83009)**

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Lapiedra, R. *See* **Iranzo, V., (81e:83009)**

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Wright, David C. Black holes and the Gibbs-Duhem relation. **(81e:83044)**

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85-01 Elementary exposition, textbooks

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85-02 Advanced exposition (research surveys, monographs, etc.)

Parker, E. N. ★Cosmical magnetic fields. **81c:85001**

85-03 Historical (must also be assigned at least one classification number from Section 01)

Weber, Joseph Gravitational radiation. (*See* **81f:01039**)

secondary classifications:

Bialas, V. Ephemerides of the early seventeenth century. **(81m:01013)**
(Flamsteed, John) *See* **Whiteside, D. T., (81m:01021)**
Freiesleben, Hans-Christian ★Geschichte der Navigation. (German) [The history of navigation] **(81h:01001)**
Hirose, Hideo The Jūjī calendar and a calendar dedicated to Otsu Temple. (Japanese) **(81b:01005)**
(Kepler, Johannes) *See* **Simon, Gérard, (81f:01010); Bialas, V., (81m:01013)** *and* **Whiteside, D. T., (81m:01021)**
Lovell, Bernard Herschel's work on the structure of the Universe. **(81m:01025)**
(Newton, Isaac) *See* **Whiteside, D. T., (81m:01021)**
Simon, Gérard ★Kepler—astronome, astrologue. (French) [Kepler—astronomer, astrologer] **(81f:01010)**
Whiteside, D. T. Kepler, Newton and Flamsteed on refraction through a "regular aire": the mathematical and the practical. **(81m:01021)**

85-04 Explicit machine computation and programs (not the theory of computation or programming)

85-05 Experimental papers

85-06 Proceedings, conferences, etc.

(Gray, D. F.) *See* **Stellar turbulence, 81j:85001**
(Linsky, J. L.) *See* **Stellar turbulence, 81j:85001**
Colloquium:
International Astronomical Union ★Stellar turbulence. **81j:85001**
London, Ont. ★Stellar turbulence. **81j:85001**
Stellar turbulence ★Stellar turbulence. **81j:85001**

secondary classifications:

(Giacconi, Riccardo) *See* **Physics and astrophysics of neutron stars and black holes, (81k:83004)**
(Ruffini, Remo) *See* **Physics and astrophysics of neutron stars and black holes, (81k:83004)**
Physics and astrophysics of neutron stars and black holes ★Physics and astrophysics of neutron stars and black holes. **(81k:83004)**
Proceedings of the International School of Physics "Enrico Fermi" ★Physics and astrophysics of neutron stars and black holes. **(81k:83004)**
Varenna ★Physics and astrophysics of neutron stars and black holes. **(81k:83004)**

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85A05 Galactic and stellar dynamics

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Contopoulos, G. (*with* Papayannopoulos, Th.) Orbits in weak and strong bars. **81k:85001**
Eggleton, P. P. *See* **Lynden-Bell, D., 81a:85001**
Ěneev, T. M. The equation of the accumulative process of formation of planetary systems. (Russian) **81i:85001**
Geĭdarov, M. F. Dynamics of the differential motion of star systems in a non-steady-state condition. (Russian) (*See* **80d:00021**)
Glass, E. N. Newtonian spherical gravitational collapse. **81g:85002**
Gudmundsson, Einar H. (*with* Buchler, J. Robert) On the consequence of neutrino trapping in gravitational collapse. **81e:85001**
Holman, Gordon D. *See* **Scott, John S.; et al., 81h:85003**
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Ipser, James R. A binding-energy criterion for the dynamical stability of spherical stellar systems in general relativity. **81g:85003**
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Kopal, Zdeněk Clairaut coordinates and the vibrational stability of distorted stars. **81e:85002**
Kutuzov, S. A. (*with* Osipkov, L. P.) A generalized model for the three-dimensional gravitational potential of stellar systems. **81h:85001**
Lau, Y. Y. (*with* Lin, C. C.) Density-wave theory of spiral structure of galaxies. **81m:85002**
Lerche, I. (*with* Low, B. C.) The heating of a thermally conducting stratified medium. I. Self-gravitating gas threaded by magnetic fields. **81g:85004**
Lin, C. C. *See* **Lau, Y. Y., 81m:85002**
Low, B. C. *See* **Lerche, I., 81g:85004**
Lundberg, John *See* **Szebehely, Victor; et al., 81h:85004**
Lynden-Bell, D. (*with* Eggleton, P. P.) On the consequences of the gravothermal catastrophe. **81a:85001**
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McGahee, William J. *See* **Szebehely, Victor; et al., 81h:85004**
Michaelidis, P. Orbits near a 2/3 resonance. **81m:85003**
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Otzoločenko, I. V. *See* **Nadëžin, D. K., 81h:85002**
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Papayannopoulos, Th. Orbits near the particle resonance of a galaxy. I. Numerical study. **81a:85002a**
Orbits near the particle resonance of a galaxy. II. Theoretical study. **81a:85002b**
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Poljačenko, V. L. (*with* Šuhman, I. G.) Nonlinear waves in collisionless gravitating systems. **81a:85003**
Instability of prolate stellar systems. **81e:85003**
Raevskiĭ, M. A. Nonlinear interaction of spiral density waves in flat galaxies. **81k:85003**
Scott, John S. (*with* Holman, Gordon D.; Ionson, James A.; Papadopoulos, K.) The heating of gas in clusters of galaxies by relativistic electrons: collective effects. **81h:85003**
Sienkiewicz, R. Stability of white dwarfs undergoing spherically symmetric steady-state accretion. **81d:85001**
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Szebehely, Victor (*with* Lundberg, John; McGahee, William J.) Potential in the central bar structure. **81h:85004**
Tubbs, Allan D. Galactic spiral shocks: vertical structure, thermal phase effects, and self-gravity. **81h:85005**
Verhulst, Ferdinand Periodic solutions of continuous self-gravitating systems. **81k:85004**
Waxman, Allen M. On Maclaurin and Jacobi objects embedded in halos: the shift in the point of bifurcation. **81e:85004**
Wollman, Stephen Global-in-time solutions of the two-dimensional Vlasov-Poisson systems. **81e:85005**
Yabushita, S. On exact solutions of diffusion equation in cometary dynamics. **81k:85006**

secondary classifications:

Antonov, V. A. Periodic and conditionally periodic trajectories in conservative systems under minimal conditions of smoothness. I. (Russian. English summary) **(81g:58030a)**
Periodic and conditionally periodic trajectories in conservative systems under minimal conditions of smoothness. II. (Russian. English summary) **(81g:58030b)**
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Ishwar, Bhola Librations around the collinear points with variable primary masses. **(81k:70010)**
Kates, Ronald E. Motion of a small body through an external field in general relativity calculated by matched asymptotic expansions. **(81j:83008a)**
Gravitational radiation damping of a binary system containing compact objects calculated using matched asymptotic expansions. **(81j:83008b)**
Motion of an electrically or magnetically charged body with possibly strong internal gravity through external electromagnetic and gravitational fields. **(81j:83008c)**
Leach, P. G. L. A note on the Hénon-Heiles problem. **(81h:70010)**
Nielsen, Dale *See* **Peratt, Anthony L.; et al., (81d:76122)**
Noussair, Ezzat S. (*with* Swanson, Charles A.) Positive solutions of semilinear Schrödinger equations in exterior domains. **(81b:35031)**
Peratt, Anthony L. (*with* Green, James; Nielsen, Dale) Evolution of colliding plasmas. **(81d:76122)**

Sharma, K. C. *See* **Sharma, R. C., (81e:76044)**
Sharma, R. C. (*with* Sharma, K. C.) Suspended particles and the gravitational instability of a rotating plasma. **(81e:76044)**
Swanson, Charles A. *See* **Noussair, Ezzat S., (81b:35031)**
Whittaker, J. M. Dynamics with variable masses. **(81k:70008)**

85A10 Astronautics

Čečel'nickiĭ, A. M. ★Экстремальность, устойчивость, резонансность в астродинамике и космонавтике. (Russian) [Extremality, stability, and resonance in astrodynamics and cosmonautics] **81m:85004**
(Narimanov, G. S.) *See* **Čečel'nickiĭ, A. M., 81m:85004**
Vaĭkov'jak, S. N. Representation of a shadow function in the form of a series in degrees of eccentricity of a satellite's orbit. (Russian. English summary) **81k:85005**

secondary classifications:

Dosybekov, K. Relativistic effects in the dynamics of spacecraft. (Russian) **(81f:83017)**

85A15 Stellar structure

Al-Bayaty, A. R. *See* **Mohan, C., 81k:85006**
Barton, Robert T. *See* **Norman, Michael L.; et al., 81k:85007**
Bernstein, Ira B. (*with* Book, David L.) Stability of the Primakoff-Sedov blast wave and its generalizations. **81g:85005**
Bogojavlenskiĭ, O. I. Self-similar movements of gas in stars. (Russian. English summary) **81c:85002**
(*with* Novikov, S. P.) Finite-dimensional oscillatory models in the general theory of relativity and in gas dynamics. (Russian. English summary) **81d:85002**
Book, David L. *See* **Bernstein, Ira B., 81g:85005**
Cohen, Jeffrey M. (*with* Kearney, Michael W.) Neutron star electrodynamics in curved space. **81e:85006**
Gabriel, M. On the multiplicity of the eigenvalues of nonradial stellar oscillations. **81c:85003**
Gail, H.-P. Stochastic approach. (*See* **81j:85001**)
Gillon, Daniel Stabilité des systèmes stellaires sphériques vis-à-vis des modes asphériques. (English summary) **81g:85006**
Golubjatnikov, A. N. (*with* Kalamkarov, A. L.) Gravitational compression of a body with the formation of a shock wave. (Russian. Georgian and English summaries) **81m:85005**
Ivanova, T. S. (*with* Ruzmaĭkin, A. A.) Nonaxisymmetric solar dynamo. (Russian. English summary) **81e:85007**
Kalamkarov, A. L. *See* **Golubjatnikov, A. N., 81m:85005**
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Lerche, I. (*with* Low, B. C.) On the equilibrium structures of self-gravitating masses of gas containing axisymmetric magnetic fields. **81e:85008**
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Mohan, C. (*with* Al-Bayaty, A. R.) Power-series solutions of the Lane-Emden equation. **81k:85006**
Norman, Michael L. (*with* Wilson, James R.; Barton, Robert T.) A new calculation on rotating protostar collapse. **81h:85007**
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Pekeris, C. L. Stationary spiral flow in polytropic stellar models. **81h:85008**
Ruzmaĭkin, A. A. *See* **Ivanova, T. S., 81e:85007**
Surkisjan, A. V. Polytropic spheres in the bimetric theory of gravitation. **81h:85009**
Simon, Norman R. An iterative treatment of double-mode pulsation. **81c:85004**
Wilson, James R. *See* **Norman, Michael L.; et al., 81h:85007**
Žukov, A. V. On the averaged equations of the dynamics of plane gravitating gas disks. (Russian) **81j:85002**

secondary classifications:

Avetisjan, A. K. Interaction of charged particles with the field of a rotating magnetic dipole in the presence of electromagnetic radiation. **(81m:78014)**
Chau, K. L. (*with* Chau, W. Y.) Mathematical theory of reduction of physical parameters and similarity analysis. **(81i:35010)**
Chau, W. Y. *See* **Chau, K. L., (81i:35010)**
Ishizuka, Toshihisa Propagation of a shock wave in general relativity. Stationary approximation. **(81d:76131)**
Matese, John J. (*with* Whitman, Patrick G.) New method for extracting static equilibrium configurations in general relativity. **(81h:83012)**
Samarskiĭ, A. A. Numerical simulation in plasma physics. **(81k:76091)**
Treder, Hans-Jürgen Die relativistische Vergrößerung des scheinbaren Sonnenradius. (English summary) **(81c:83005)**
Tubbs, Allan D. Galactic spiral shocks: vertical structure, thermal phase effects, and self-gravity. **(81h:85005)**
Whitman, Patrick G. *See* **Matese, John J., (81h:83012)**

85A20 Stellar atmospheres

Bhowmick, J. B. A study of the expansion of the solar corona with radiation heat flux. **81e:85009**
Cuperman, S. (*with* Weiss, I.; Dryer, M.) Higher order fluid equations for multicomponent nonequilibrium stellar (plasma) atmospheres and star clusters. **81g:85007**
Das, Rabindra Nath Exact solution of a key equation in a finite stellar atmosphere by the method of Laplace transform and linear singular operators. **81a:85004**
Exact solution of a key equation in a finite planetary atmosphere by the method of Laplace transform and linear singular operators. **81a:85005**
Dryer, M. *See* **Cuperman, S.; et al., 81g:85007**
Garlick, A. R. Buoyancy effects in spherical accretion. **81g:85008**
Heyvaerts, Jean (*with* Lasry, Jean-Michel; Schatzman, Michelle; Witomski, P.) Solar flares: a nonlinear eigenvalue problem in an unbounded domain. **81f:85001**
Jackson, E. Atlee Finite force-free pulsar atmosphere models. **81a:85006**
Kahn, F. D. Turbulent mixing of stellar winds and interstellar gas. **81b:85002**
Lasry, Jean-Michel *See* **Heyvaerts, Jean; et al., 81f:85001**
Schatzman, Michelle *See* **Heyvaerts, Jean; et al., 81f:85001**
Sedlmayr, E. The application of mesoturbulence to stellar atmospheres. (*See* **81j:85001**)
Summers, D. Summary of solutions to the spherically symmetric accretion and stellar wind problems. **81k:85007**
Weiss, I. *See* **Cuperman, S.; et al., 81g:85007**
Witomski, P. *See* **Heyvaerts, Jean; et al., 81f:85001**
Zahn, Jean-Paul Stellar convection theory. (*See* **81j:85001**)

secondary classifications:

Bishnu, S. K. *See* **Das Gupta, S. R.; et al., (81k:85011)**
Bonazzola, S. *See* **Hameury, J. M.; et al., (81k:76024)**
Bujarbarua, S. (*with* Shukla, P. K.) Magnetosonic shocks in nonlinear dispersive media. **(81b:76069)**
Das Gupta, S. R. (*with* Islam, Z.; Bishnu, S. K.) On transfer equation in a semi-infinite atmosphere with albedo $\omega > 1$. **(81k:85011)**
Endean, V. G. The pulsar magnetosphere as a giant radio aerial. **(81k:78014)**
Hameury, J. M. (*with* Bonazzola, S.; Heyvaerts, Jean) Stability of accretion column flows. **(81k:76024)**
Heyvaerts, Jean *See* **Hameury, J. M.; et al., (81k:76024)**
Islam, Z. *See* **Das Gupta, S. R.; et al., (81k:85011)**
Letelier, Patricio S. Clouds of strings in general relativity. **(81k:83017)**
Paczyński, B. (*with* Wiita, P. J.) Thick accretion disks and supercritical luminosities. **(81k:85010)**
Shukla, P. K. *See* **Bujarbarua, S., (81b:76069)**
Traving, G. Mesoturbulence. (*See* **81j:85001**)
Wiita, P. J. *See* **Paczyński, B., (81k:85010)**

85A25 Radiative transfer

Baptista, J. P. (*with* Gerbal, D.) The Jeans's instability in an expanding medium. **81k:85008**
Belleni-Morante, Aldo *See* **Busoni, Giorgio; et al., 81c:85005**
Bishnu, S. K. *See* **Das Gupta, S. R.; et al., 81k:85011**
Busoni, Giorgio (*with* Frosali, Giovanni; Belleni-Morante, Aldo) A nonlinear problem of evolution arising from radiation transfer theory. **81c:85005**
Canfield, Richard C. (*with* Ricchiazzi, Paul J.) A probabilistic approach to radiative energy loss calculations for optically thick atmospheres: hydrogen lines and continua. **81h:85010**
Das, Rabindra Nath Exact solution of a basic equation in finite atmosphere by the method of Laplace transform and linear singular operators. **81m:85006a**
Exact solution of a simple time-dependent integro-differential equation by the method of Laplace transform and the theory of linear singular operators. **81m:85006b**
Das Gupta, S. R. (*with* Islam, Z.; Bishnu, S. K.) On transfer equation in a semi-infinite atmosphere with albedo $\omega > 1$. **81k:85011**
Fel'dman, I. A. Finiteness of the discrete spectrum of a characteristic equation of the theory of radiation transfer with a Hölder indicatrix. (Russian) **81f:85002**
Frosali, Giovanni *See* **Busoni, Giorgio; et al., 81c:85005**
Gerbal, D. *See* **Baptista, J. P., 81k:85008**
Hovenier, J. W. Reduction of the standard problem in radiative transfer for a medium of finite optical thickness. **81a:85007**
Islam, Z. *See* **Das Gupta, S. R.; et al., 81h:85011**
Kelley, C. T. Solution of the Chandrasekhar H-equation by Newton's method. **81j:85003**
Knjazihin, Ju. Structure of the solution of certain systems of integral equations connected with the approximate solution of the problem of radiative transfer. (Russian. English summary) **81b:85003**
Kuz'mina, M. G. A characteristic equation of the theory of polarized radiation transfer. (Russian) **81g:85009**
Larsen, E. W. (*with* Pomraning, G. C.) Asymptotic analysis of nonlinear Marshak waves. **81k:85009**
Loskutov, V. M. (*with* Sobolev, V. V.) Polarization of scattered radiation in the presence of internal sources. **81f:85003**
Nagirner, D. I. Calculation of the spectrum of the integral equation of radiative transfer. II. The plane layer of finite optical thickness. (Russian. English summary) **81f:85004b**
Calculation of the spectrum of the integral equation of radiative transfer. I. Semi-infinite medium. **81f:85004a**
Pomraning, G. C. *See* **Larsen, E. W., 81k:85009**
Ricchiazzi, Paul J. *See* **Canfield, Richard C., 81h:85010**
Sobolev, V. V. *See* **Loskutov, V. M., 81f:85003**
Thorne, Kip S. Relativistic radiative transfer: moment formalisms. **81m:85007**
Wang, A. P. A mathematical model of a cloud. **81e:85010**
Yorke, H. W. Numerical solution of the equation of radiation transfer in spherical geometry. **81e:85011**

secondary classifications:

Aristov, V. V. (*with* Čeremisin, F. G.) The conservative splitting method for the solution of a Boltzmann equation. (Russian) **(81c:82031)**
Arutjunjan, V. M. (*with* Džotjan, G. P.; Karmenjan, A. V.) The theory of quasiwaveguide generation of an active layer. (Russian. Armenian and English summaries) **(81m:78020)**
Čeremisin, F. G. *See* **Aristov, V. V., (81c:82031)**
Četveruškin, B. N. *See* **Volčinskaja, M. I., (81e:76057)**
Dehesa, Jesús S. Orthogonal polynomials in transport theories. **(81m:82050)**
Džotjan, G. P. *See* **Arutjunjan, V. M.; et al., (81m:78020)**

Jrnovickiĭ, E. G. Radiation field in a plane atmosphere in the case of anisotropic scattering. Separation of the angular variables. **(81m:78022)**
Karmenjan, A. V. *See* **Arutjunjan, V. M.; et al., (81m:78020)**
Lipovskiĭ, V. D. Cherenkov radiation of acoustic-gravitational waves of horizontally moving sources. I. **(81j:85004)**
Maiorino, J. R. *See* **Siewert, C. E., (81h:78023)**
Pikiĭjan, O. V. Green's function of an optically thick layer. **(81m:78002)**
Salnovič, L. A. Equations with a difference kernel on a finite interval. (Russian) **(81i:45011)**
Siewert, C. E. (*with* Maiorino, J. R.) The complete solution for the scattering of polarized light in a Rayleigh and isotropically scattering atmosphere. **(81h:78023)**
Volčinskaja, M. I. (*with* Četveruškin, B. N.) Solution of two-dimensional non-steady-state problems of radiative gas dynamics. (Russian) **(81e:76057)**

85A30 Hydrodynamic and hydromagnetic problems [See also 76Y05.]

Aly, J. J. Electrodynamics of disk accretion onto magnetic neutron star. **81d:85003**
Ilčenko, A. S. Interaction of nonrelativistic electrons with radiation in a magnetic field. **81h:85012**
Kočanov, A. E. *See* **Kontorovič, V. M., 81g:85010**
Kontorovič, V. M. (*with* Kočanov, A. E.) Formation of universal and diffusion regions of nonlinear spectra of relativistic electrons in spatially limited sources. **81g:85010**
Lipovskiĭ, V. D. Cherenkov radiation of acoustic-gravitational waves of horizontally moving sources. I. **81j:85004**
Onišćenko, O. G. Plasma waves propagating along a magnetic field in a strongly anisotropic relativistic plasma. **81b:85004**

secondary classifications:

Lacombe, C. (*with* Mangeney, A.) Nonlinear interaction of Alfvèn waves with compressive fast magnetosonic waves. **(81g:76125)**
Lerche, I. Mathematical theory of one-dimensional isothermal blast waves in a magnetic field. **(81i:76036)**
Lominadze, D. G. (*with* Mihaĭlovskiĭ, A. B.; Sagdeev, R. Z.) Langmuir turbulence of a relativistic plasma in a strong magnetic field. **(81b:82009)**
Malik, S. K. (*with* Singh, Manohar) Modulational instability in a self-gravitating fluid column. **(81d:76052)**
Mangeney, A. *See* **Lacombe, C., (81g:76125)**
Mathers, C. D. Simplified expressions for the calculation of the viscosity of partly ionized gases. **(81h:76070)**
Mihaĭlovskiĭ, A. B. *See* **Lominadze, D. G.; et al., (81b:82009)**
Parker, E. N. ★Cosmical magnetic fields. **(81e:85001)**
Pekeris, C. L. Stationary spiral flow in polytropic stellar models. **(81h:85008)**
Roy, Archie E. ★Orbital motion. **(81j:70012)**
Sagdeev, R. Z. *See* **Lominadze, D. G.; et al., (81b:82009)**
Singh, Manohar *See* **Malik, S. K., (81d:76052)**
Zeytounian, Radyadour Kh. Magnetic hydrodynamics of heavy fluids. (Russian) **(81g:76117)**

85A35 Statistical astronomy

Gordon, Kurtiss J. The Doppler effect: a consideration of quasar redshifts. **81e:85012**
Grindlay, Jonathan E. *See* **Lightman, Alan P.; et al., 81j:85005**
Hertz, Paul *See* **Lightman, Alan P.; et al., 81j:85005**
Johnson, D. *See* **Nicoll, J. F.; et al., 81m:85008**
Lightman, Alan P. (*with* Hertz, Paul; Grindlay, Jonathan E.) A new statistical test with application to globular cluster X-ray source masses. **81j:85005**
Nicoll, J. F. (*with* Johnson, D.; Segal, Irving E.; Segal, W.) Statistical invalidation of the Hubble law. **81m:85008**
Segal, Irving E. *See* **Nicoll, J. F.; et al., 81m:85008**
Segal, W. *See* **Nicoll, J. F.; et al., 81m:85008**

secondary classifications:

Segal, Irving E. The redshift-magnitude relation for bright galaxies at low redshifts. **(81i:85002)**

85A40 Cosmology {For relativistic cosmology, see 83F05.}

Barberis, B. (*with* Galletto, Dionigi) Foundations of Newtonian cosmology. **81c:85006**
Galletto, Dionigi *See* **Barberis, B., 81c:85006**
Maročnik, L. S. (*with* Naselskiĭ, P. D.; Pelihov, N. V.) Turbulence in cosmology. IV. Asymptotic influence of long-wave disturbances on the expansion of a homogeneous and, on average, isotropic universe close to the cosmological singularity. **81f:85005**
Naselskiĭ, P. D. *See* **Maročnik, L. S.; et al., 81f:85005**
Paczyński, B. (*with* Wiita, P. J.) Thick accretion disks and supercritical luminosities. **81k:85010**
Pelihov, N. V. *See* **Maročnik, L. S.; et al., 81f:85005**
Schmitt, J. H. M. M. The anisotropic microwave background in Bianchi V models. **81e:85013**
Segal, Irving E. The redshift-magnitude relation for bright galaxies at low redshifts. **81i:85002**
Tayler, R. J. Cosmology, astrophysics and elementary particle physics. **81h:85013**
Tomita, Kenji On inhomogeneous cosmological models containing space-like and time-like singularities alternately. **81f:85006**
Van den Bergh, N. Paradoxes in extragalactic observations? **81f:85007**
Wiita, P. J. *See* **Paczyński, B., 81k:85010**

secondary classifications:

Boynton, Paul *See* **Davis, Marc, (81c:83039)**
Brout, R. (*with* Englert, F.; Frère, J.-M.; Gunzig, E.; Nardone, P.; Truffin, C.; Spindel, Ph.) Cosmogenesis and the origin of the fundamental length scale. **(81i:83054)**
Davis, Marc (*with* Boynton, Paul) On the present observability of density-temperature fluctuations in the early universe. **(81c:83039)**
Demaret, Jacques On Wheeler's "rule of unanimity" in quantum cosmology. **(81d:83031)**
Englert, F. *See* **Brout, R.; et al., (81i:83054)**
Frère, J.-M. *See* **Brout, R.; et al., (81i:83054)**
Gunzig, E. *See* **Brout, R.; et al., (81i:83054)**
Hellings, Ronald W. *See* **Zimmerman, Robert L., (81k:83046)**
Nardone, P. *See* **Brout, R.; et al., (81i:83054)**
Schucking, E. L. *See* **Spedalere, R., (81g:83072)**
(Smarr, Larry L.) *See* **Sources of gravitational radiation, (81j:83017)**
Spedalere, R. (*with* Schucking, E. L.) A scale parameter for Friedmann models. **(81g:83072)**
Spindel, Ph. *See* **Brout, R.; et al., (81i:83054)**
Truffin, C. *See* **Brout, R.; et al., (81i:83054)**
Zimmerman, Robert L. (*with* Hellings, Ronald W.) Gravitational radiation dominated cosmologies. **(81k:83046)**
Gravitational radiation ★Sources of gravitational radiation. **(81j:83017)**
Seattle, Wash. ★Sources of gravitational radiation. **(81j:83017)**
Sources of gravitational radiation ★Sources of gravitational radiation. **(81j:83017)**
Workshop:
Sources of Gravitational Radiation ★Sources of gravitational radiation. **(81j:83017)**

85A45 Radio astronomy

secondary classifications:

Bernaud, J.-C. Graceful graphs, radio antennae and French windmills. **(81j:05109)**

85A99 Miscellaneous topics

Calmuš, R. Emden-Chandrasekhar axisymmetric, solid-body rotating polytropes. I. Exact solutions for the special cases $N = 0$, 1 and 5. **81g:85011**
Čubarjan, È. V. *See* **Sarkisjan, A. V.; et al., 81b:85005**
Elster, Thomas Diffraction of electromagnetic waves in Schwarzschild's space-time. **81e:85014**
Gevorkjan, A. S. *See* **Sarkisjan, A. V.; et al., 81b:85005**
Gleeson, L. J. *See* **Webb, G. M., 81c:85007**
Gossler, M. Basisformeln zur programmierten Umrechnung einiger astronomischer Kalendertypen. (English summary) **81i:85003**
Kopal, Zdeněk An analysis of the radial velocity curves of close binary systems. I. **81g:85012a**
An analysis of the radial velocity curves of close binary systems. II. **81g:85012b**
Sarkisjan, A. V. (*with* Čubarjan, È. V.; Gevorkjan, A. S.) Slowly rotating incompressible configurations according to the bimetric theory of gravitation. (Russian. English summary) **81b:85005**
Stuchlík, Z. Equatorial circular orbits and the motion of the shell of dust in the field of a rotating naked singularity. **81e:85015**
Webb, G. M. (*with* Gleeson, L. J.) Cosmic-ray flow lines and energy changes. **81c:85007**

secondary classifications:

Blandford, R. D. (*with* Thorne, K. S.) Black hole astrophysics. (*See* **81i:83002**)
McKinley, John M. Relativistic transformation of solid angle. **(81e:83005)**
Piragas, L. E. The effect of high frequency forces on the dynamics of a test particle in general relativity. (Russian) **(81j:83032)**
Sen, K. K. *See* **Wilson, S. J., (81h:78024)**
Summers, D. Spurious solutions of the Navier-Stokes equations. **(81k:76019)**
Thorne, K. S. *See* **Blandford, R. D., (*See* 81i:83002)**
Wilson, S. J. (*with* Sen, K. K.) Light scattering by an optically thin inhomogeneous, spherically-symmetric planetary atmosphere: brightness at the zenith near the terminator. **(81h:78024)**

86–XX GEOPHYSICS [See also 73Nxx, 76U05, 76V05.]

86–01 Elementary exposition, textbooks

86–02 Advanced exposition (research surveys, monographs, etc.)

de Ruijter, Will ★On the asymptotic analysis of large-scale ocean circulation. **81h:86001**

86–03 Historical (must also be assigned at least one classification number from Section 01)

Brush, Stephen G. Discovery of the Earth's core. **81h:86002**

secondary classifications:

Garland, G. D. The contributions of Carl Friedrich Gauss to geomagnetism. (French summary) **(81e:01021)**
(Gauß, Carl Friedrich) *See* **Garland, G. D., (81e:01021)**
Monna, A. F. Gauss and the physical sciences. (*See* **80g:01034**)
Biography:
Gauß, Carl Friedrich *See* **Monna, A. F., (*See* 80g:01034)**

86–04 Explicit machine computation and programs (not the theory of computation or programming)

secondary classifications:

Rïeplinskiĭ, D. G. *See* **Sarkisjan, A. S., (81k:86005)**
Sarkisjan, A. S. (*with* Rïeplinskiĭ, D. G.) Numerical modeling of the large-scale oceanic circulation. **(81k:86005)**

86–05 Experimental papers

86–06 Proceedings, conferences, etc.

(DePriest, Douglas J.) *See* **Statistical analysis of weather modification experiments, 81k:86001**
(McCammon, Richard B.) *See* **Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels, 81j:86001**
(Wegman, Edward J.) *See* **Statistical analysis of weather modification experiments, 81k:86001**
Earth sciences ★Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels. **81j:86001**
Meeting:
American Statistical Association ★Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels. **81j:86001**
Statistical analysis of weather modification experiments ★Statistical analysis of weather modification experiments. **81k:86001**
Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels ★Statistics and earth sciences—the challenge for the 80's and statistical problems in exploration and resource evaluation of energy fuels. **81j:86001**
Tallahassee, Fla. ★Statistical analysis of weather modification experiments. **81k:86001**
Weather modification ★Statistical analysis of weather modification experiments. **81k:86001**
Workshop:
Design and Analysis of Weather Modification Experiments ★Statistical analysis of weather modification experiments. **81k:86001**

86A04 General

Kiselev, M. I. (*with* Kuzivanov, V. A.) The possibility of measurements in geophysics by weakly damped systems. (Russian) **81k:86002**
Kuzivanov, V. A. *See* **Kiselev, M. I., 81k:86002**

secondary classifications:

Bass, F. G. (*with* Fuks, I. M.) ★Wave scattering from statistically rough surfaces. **(81j:78016)**
Fuks, I. M. *See* **Bass, F. G., (81j:78016)**
(Vesecky, Carol B.) *See* **Bass, F. G.; et al., (81j:78016)**
(Vesecky, John F.) *See* **Bass, F. G.; et al., (81j:78016)**

86A05 Hydrology, hydrography, oceanography [See also 76B15, 76B20, 76B25, 76C15, 76E20, 76Q05, 76Rxx, 76U05.]

Ammicht, E. *See* **Stickler, David C., 81d:86007**
Berestov, A. L. Solitary Rossby waves. **81i:86001**
Berezovs'kiĭ, A. A. (*with* Bopuslavskiĭ, A. S.) Exact solutions of nonlinear problems of turbulent diffusion with account taken of the dependence of the diffusion coefficient on the scale, time and impurity concentration. (Russian) **81g:86001**
Bopuslavskiĭ, A. S. *See* **Berezovs'kiĭ, A. A., 81g:86001**
Bubnov, M. A. *See* **Marčuk, G. I., 81e:86001**
Davies, A. M. On formulating a three-dimensional hydrodynamic sea model with an arbitrary variation of vertical eddy viscosity. **81d:86001**
Dick, E. Numerical simulation of unsteady dispersion in a shallow sea by an upwind finite element method. **81m:86001**
Easton, A. K. A tidal model of Corio Bay, Victoria. (*See* **81a:76005**)
Fel'zenbaum, A. I. *See* **Muzylev, S. V., 81d:86005**
Fridman, V. E. *See* **Pelinovskiĭ, E. N.; et al., 81e:86004**
Frolov, A. V. Two-parameter model of the steady-state thermocline in the ocean. **81k:86003**
Hidaka, Koji Dynamics of ocean currents parallel to a long straight coast. **81d:86002**
Hodnett, P. F. (*with* Holland, F.; King-Hele, J. A.) Note on the advective model of the thermocline circulation. **81h:86004**
Holland, F. *See* **Hodnett, P. F.; et al., 81h:86004**
King-Hele, J. A. *See* **Hodnett, P. F.; et al., 81h:86004**
Kordzadze, A. A. The solvability of a three-dimensional stationary quasilinear problem of the baroclinic ocean. (Russian) **81d:86003**
See also **Marčuk, G. I.; et al., 81m:86002**
Leibovich, S. (*with* Paolucci, S.) Energy stability of the Eulerian-mean motion in the upper ocean to three-dimensional perturbations. **81d:86004**
Longuet-Higgins, M. S. The trajectories of particles in steep, symmetric gravity waves. **81g:86002**
Marčuk, G. I. (*with* Kordzadze, A. A.; Zalesnyĭ, V. B.) Problems of mathematical modeling of sea and ocean currents. (Russian) **81m:86002**
(*with* Bubnov, M. A.) The method of isolation of the barotropic component in ocean dynamic problems. (Russian) **81e:86001**
Muzylev, S. V. (*with* Fel'zenbaum, A. I.) Structure of wind-induced equatorial currents in a linear two-layer model with zero bottom friction. **81d:86005**
Mysak, Lawrence A. Topographically trapped waves. **81e:86002**
Nof, Doron The influence of varying bathymetry on inertial boundary currents. (Russian summary) **81e:86003**
Paolucci, S. *See* **Leibovich, S., 81d:86004**
Pelinovskiĭ, E. N. (*with* Petuhov, Ju. V.; Fridman, V. E.) Approximate equations for the propagation of strong acoustic signals in the ocean. **81e:86004**
Petrov, V. V. Dynamics of nonlinear surface waves in a stratified ocean. **81k:86004**
Petuhov, Ju. V. *See* **Pelinovskiĭ, E. N.; et al., 81e:86004**
de Ruijter, Will Boundary layers in large scale ocean circulation. **81d:86006**
Rïeplinskiĭ, D. G. *See* **Sarkisjan, A. S., 81k:86005**
Sarkisjan, A. S. (*with* Rïeplinskiĭ, D. G.) Numerical modeling of the large-scale oceanic circulation. **81k:86005**
Smith, Ronald B. Buoyancy effects upon longitudinal dispersion in wide well-mixed estuaries. **81e:86005**
Stickler, David C. (*with* Ammicht, E.) Uniform asymptotic evaluation of the continuous spectrum contribution for the Pekeris model. **81d:86007**
Thacker, W. C. A geodesic finite-difference method for curved domains: simulations of tidal motion on a sphere. **81h:86005**
Topham, D. R. The disposition of gas-oil mixtures trapped under ice. (French summary) **81g:86003**
Zalesnyĭ, V. B. *See* **Marčuk, G. I.; et al., 81m:86002**

secondary classifications:

Aliev, A. N. (*with* Gal'cov, D. V.; Sokolov, A. A.) Rotating black hole in a strong magnetic field. (Russian) **(81g:83010)**
Bécus, Georges A. A dynamic stochastic model of stream pollution. **(81j:92044)**
Belov, Ju. Ja. Theorems of unique solvability and approximation of certain boundary value problems for a system of equations describing an ocean current. (Russian) **(81i:35136)**
Criminale, William O. Effects of mean current and shear on stability of depth distributions of marine phytoplankton. **(81j:92031)**
Cryer, Colin W. (*with* Fetter, Hans) The numerical solution of axisymmetric free boundary porous flow well problems using variational inequalities. **(81c:65063)**
Das, M. M. *See* **Pal, S. I.; et al., (81h:76057)**
Debnath, Lokenath ★Oceanic turbulence. **(81g:76066)**
Dvorjaninov, G. S. *See* **Nelepo, B. A.; et al., (81f:76019)**
Ètkin, V. S. *See* **Voljak, K. I., (81f:76011)**
Fetter, Hans *See* **Cryer, Colin W., (81c:65063)**
Frisk, George V. *See* **Macpherson, Mark K., (81g:76090)**
Gal'cov, D. V. *See* **Aliev, A. N.; et al., (81g:83010)**
Gibbon, J. D. (*with* McGuinness, Mark J.) A derivation of the Lorenz equations for some unstable dispersive physical systems. **(81m:35124)**
Herterich, Klaus *See* **Olbers, Dirk J., (81e:76012)**
Ko, D. R. S. *See* **Liu, A. K.; et al., (81d:76013)**
Kohler, Werner E. Pulse propagation in a randomly perturbed ocean: single pulse statistics. **(81h:76045)**
Kubota, T. *See* **Liu, A. K.; et al., (81d:76013)**
Kuo, Yi Yu *See* **Masuda, Akira; et al., (81f:76009a); Mitsuyasu, Hisashi; et al., (81f:76009b)** *and* **Masuda, Akira; et al., (81f:76009c)**
Li, Huon *See* **Pal, S. I.; et al., (81h:76057)**
Liu, A. K. (*with* Kubota, T.; Ko, D. R. S.) Resonant transfer of energy between nonlinear waves in neighboring pycnoclines. **(81d:76013)**
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Geĭko, V. S. On uniqueness conditions for determining from a hodograph the rate of seismic wave propagation outside waveguides. (Russian) **81j:86002**
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86A35 Atmospheric physics [See also 76C15, 76C20, 76E20, 76Rxx, 76U05, 76V05.]

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Srivastava, Ramesh (*with* Passarelli, R. E.) Analytical solutions to simple models of condensation and coalescence. **81b:86009**

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Young, E. R. (*with* Richards, P. G.; Torr, D. G.) A flux preserving method of coupling first and second order equations to simulate the flow of plasma between the protonosphere and the ionosphere. **81j:86003**

Zeytounian, Radyadour Kh. Models for Lee waves in a baroclinic compressible troposphere. **81e:86019**

secondary classifications:

Bonivento, C. (*with* Tonielli, A.; Fronza, G.; Spirito, A.) The use of stochastic models in air pollution prediction and control: problems and numerical results. (*See* **81f:93067**)
Cooley, C. R. *See* **Thorndike, A. S.; et al., (81m:58022)**
Das, Rabindra Nath Exact solution of a key equation in a finite planetary atmosphere by the method of Laplace transform and linear singular operators. **(81a:85005)**
Dolin, L. S. (*with* Savel'ev, V. A.) Equation of optical image transfer in a scattering medium. **(81k:78013)**
Fronza, G. *See* **Bonivento, C.; et al., (*See* 81f:93067)**
Harper, B. A. (*with* Sobey, R. J.; Stark, K. P.) Sensitivity analysis of a tropical cyclone surge model. (*See* **81a:76005**)
Herring, Jackson R. Statistical theory of quasigeostrophic turbulence. **(81d:76057)**
Holton, J. R. Wave propagation and transport in the middle atmosphere. **(81b:86001)**
Källén, E. (*with* Wiin-Nielsen, A. C.) Nonlinear, low order interactions. (Russian summary) **(81k:86006)**
Kasahara, Akira Effect of zonal flows on the free oscillations of a barotropic atmosphere. **(81d:76051)**
Leader, J. Carl Beam properties of partially coherent curved beam waves in the turbulent atmosphere. **(81d:78003)**
Makarov, G. I. (*with* Novikov, V. V.) The effect of high-altitude inhomogeneities of the atmosphere on the eigenvalues of normal waves in the problem of diffraction of radio waves around the spherical earth. (Russian) **(81g:78028)**
Novikov, V. V. *See* **Makarov, G. I., (81g:78028)**
Nye, J. F. *See* **Thorndike, A. S.; et al., (81m:58022)**
Ovčinnikov, A. O. Analytic theory of MHD wave propagation in an ionospheric waveguide. (Russian) **(81m:78027)**
Savel'ev, V. A. *See* **Dolin, L. S., (81k:78013)**
Sobey, R. J. *See* **Harper, B. A.; et al., (*See* 81a:76005)**
Spirito, A. *See* **Bonivento, C.; et al., (*See* 81f:93067)**
Stark, K. P. *See* **Harper, B. A.; et al., (*See* 81a:76005)**
Thorndike, A. S. (*with* Cooley, C. R.; Nye, J. F.) The structure and evolution of flow fields and other vector fields. **(81m:58022)**
Tonielli, A. *See* **Bonivento, C.; et al., (*See* 81f:93067)**
Wiin-Nielsen, A. C. *See* **Källén, E., (81k:86006)**

86A60 Geological problems

86A99 Miscellaneous topics

Bardsley, W. E. Estimating an upper bound to particle size in sediment populations. **81k:86012**
Čistjakov, V. K. *See* **Pudovkin, M. A.; et al., 81j:86005**
Cliff, Andrew (*with* Haggett, Peter; Ord, Keith) Graph theory and geography. (*See* **81h:05050**)
Danièljan, Ju. S. (*with* Janickiĭ, P. A.) Formation of ice seams in the freezing of damp soils. (Russian) **81h:86012**
Fomin, S. A. *See* **Pudovkin, M. A.; et al., 81j:86005**
Fowler, A. C. (*with* Larson, D. A.) On the flow of polythermal glaciers. II. Surface wave analysis. **81a:86005**
Golicyn, G. S. Geostrophic convection. (Russian) **81j:86004**
Haggett, Peter *See* **Cliff, Andrew; et al., (*See* 81h:05050)**
Janickiĭ, P. A. *See* **Danièljan, Ju. S., 81h:86012**
Larson, D. A. *See* **Fowler, A. C., 81a:86005**
Lu, K. U. Dynamics of differential rotating sphere—earthquake and continental drift. (*See* **81i:90005**)
Orć, Keith *See* **Cliff, Andrew; et al., (*See* 81h:05050)**
Pudovkin, M. A. (*with* Salamatin, A. N.; Fomin, S. A.; Čistjakov, V. K.) The effect of the form of the working surface of a hot point drill on the boring factor for ice by melting. (Russian) **81j:86005**
Salamatin, A. N. *See* **Pudovkin, M. A.; et al., 81j:86005**
Switzer, Paul Extensions of linear discriminant analysis for statistical classification of remotely sensed satellite imagery. **81k:86013**
Wallington, C. E. Objective analysis of geophysical field data. (*See* **81a:76005**)

secondary classifications:

Adhikari, A. K. (*with* Roy, Jogabrata; Sengupta, S.) Estimates of parameters of grain-size distribution from weight frequencies. **(81m:62042)**
Alfantis, Elias C. (*with* Beskos, D. E.) Heat extraction from hot dry rocks. **(81d:76092)**
Anderson, C. A. (*with* Bridwell, R. J.) A finite element method for studying the transient nonlinear thermal creep of geological structures. **(81d:73039)**
Arsenin, V. Ja. (*with* Gorjačev, V. A.; Zagonov, V. P.) Calculation of pulse functions of lines of propagation of radio pulses with reflection from the lower ionosphere. (Russian) **(81h:78012)**
Beskos, D. E. *See* **Alfantis, Elias C., (81d:76092)**
Bradshaw, Peter (*with* Woods, J. D.) Geophysical turbulence and buoyant flows. (*See* **80d:76044**)
Bridwell, R. J. *See* **Anderson, C. A., (81d:73039)**
Cooley, C. R. *See* **Thorndike, A. S.; et al., (81m:58022)**
David, Michel *See* **Davis, Michael W. D., (81j:51001)**
Davis, Michael W. D. (*with* David, Michel) An algorithm for finding the position of a point relative to a fixed polygonal boundary. **(81j:51001)**
Dienes, I. (*with* Kovács, L. B.) Maximum transitive paths and their application to a geological problem: setting up stratigraphic units. **(81i:05088)**
Gorjačev, V. A. *See* **Arsenin, V. Ja.; et al., (81h:78012)**
Grolier, Jacques *See* **Hucher, Monique; et al., (81h:52004)**
Höpflinger, Eckhard Dynamic standard setting for carbon dioxide. **(81d:92020)**
Hucher, Monique (*with* Sabatier, Germain; Grolier, Jacques) Effectifs des diverses séquences de polyèdres 3-valents convexes ayant moins de 11 faces et de polyèdres sans face triangulaire ayant de 11 à 14 faces. (English summary) **(81h:52004)**
Karpov, I. K. (*with* Laĭkevič, G. I.) Inverse physical chemistry problems as inverse problems of mathematical programming. (Russian) **(81i:90204)**
Kovács, L. B. *See* **Dienes, I., (81i:05088)**
Krauklis, L. A. (*with* Krauklis, P. V.) Kinematics and dynamics of a hydraulic wave propagated in a cased cemented borehole. (Russian) **(81d:73027)**
Krauklis, P. V. *See* **Krauklis, L. A., (81d:73027)**
Lancaster, Peter Solving quadratic equations. **(81g:65001)**
Laĭkevič, G. I. *See* **Karpov, I. K., (81i:90204)**
Nye, J. F. *See* **Thorndike, A. S.; et al., (81m:58022)**
Pouzet, J. Estimation of a surface with known discontinuities for automatic contouring purposes. **(81m:65022)**
Roy, Jogabrata *See* **Adhikari, A. K.; et al., (81m:62042)**
Sabatier, Germain *See* **Hucher, Monique; et al., (81h:52004)**
Sengupta, S. *See* **Adhikari, A. K.; et al., (81m:62042)**
Swarztrauber, Paul N. On the spectral approximation of discrete scalar and vector functions on the sphere. **(81c:65011)**
Thorndike, A. S. (*with* Cooley, C. R.; Nye, J. F.) The structure and evolution of flow fields and other vector fields. **(81m:58022)**
Woods, J. D. *See* **Bradshaw, Peter, (*See* 80d:76044)**
Zagonov, V. P. *See* **Arsenin, V. Ja.; et al., (81h:78012)**

90–XX ECONOMICS, OPERATIONS RESEARCH, PROGRAMMING, GAMES

90–01 Elementary exposition, textbooks

Beck, Robert E. *See* **Kolman, Bernard, 81g:90002**
Beightler, Charles S. (*with* Phillips, Don T.; Wilde, Douglass J.) ★Foundations of optimization. **81g:90001**
Burghes, David N. Renewable resource depletion: the conservation problem. **81i:90001**
Gromenko, V. M. ★Теория игр и ее приложение к управлению. (Russian) [Game theory and its application to control] **81h:90001**
Kolman, Bernard (*with* Beck, Robert E.) ★Elementary linear programming with applications. **81g:90002**
Kuznecov, Ju. N. (*with* Kuzubov, V. I.; Vološčenko, A. B.) ★Математическое программирование. (Russian) [Mathematical programming] **81i:90002**
Kuzubov, V. I. *See* **Kuznecov, Ju. N.; et al., 81i:90002**
Phillips, Don T. *See* **Beightler, Charles S.; et al., 81g:90001**
Vološčenko, A. B. *See* **Kuznecov, Ju. N.; et al., 81i:90002**
Wilde, Douglass J. *See* **Beightler, Charles S.; et al., 81g:90001**

secondary classifications:

Burghes, David N. (*with* Wood, Alastair D.) ★Mathematical models in the social, management and life sciences. **(81b:00009)**
Dym, Clive L. (*with* Ivey, Elizabeth S.) ★Principles of mathematical modeling. **(81c:00011)**
Guiaşu, Silviu (*with* Malitza, Mircea) ★Coalition and connection in games. **(81f:90126)**
Ivey, Elizabeth S. *See* **Dym, Clive L., (81c:00011)**
Kirkby, Michael John, III *See* **Wilson, Alan Geoffrey, (81i:00003)**
Malitza, Mircea *See* **Guiaşu, Silviu, (81f:90126)**
Miller, Ronald Eugene ★Dynamic optimization and economic applications. **(81b:49001)**
Morgenstern, Oskar *See* **von Neumann, John, (81b:90155)**
von Neumann, John (*with* Morgenstern, Oskar) ★Theory of games and economic behavior. **(81b:90155)**
Roberts, Fred S. ★Measurement theory. **(81b:90003)**
Wilson, Alan Geoffrey (*with* Kirkby, Michael John, III) ★Mathematics for geographers and planners. **(81i:00003)**
Wood, Alastair D. *See* **Burghes, David N., (81b:00009)**
Wouk, Arthur ★A course of applied functional analysis. **(81a:46003)**

90–02 Advanced exposition (research surveys, monographs, etc.)

Hwang, Ching Lai (*with* Masud, Abu Syed Md.) ★Multiple objective decision making—methods and applications. **81d:90001**
Masud, Abu Syed Md. *See* **Hwang, Ching Lai, 81d:90001**
(Paldy, Sudhakar R.) *See* **Hwang, Ching Lai; et al., 81d:90001**
Ralescu, Dan A survey of the representation of fuzzy concepts and its applications. **81b:90001**
(Yoon, Kwangsun) *See* **Hwang, Ching Lai; et al., 81d:90001**

secondary classifications:

Balasko, Yves A geometric approach to equilibrium analysis. **(81c:90022)**
Casti, John L. ★Connectivity, complexity, and catastrophe in large-scale systems. **(81d:93007)**
Ekeland, Ivar ★Éléments d'économie mathématique. (French) [Elements of mathematical economics] **(81b:90027)**
Funk, Sandra G. *See* **Rapoport, Amnon; et al., (81f:90127)**
Horowitz, Abraham D. *See* **Rapoport, Amnon; et al., (81f:90127)**
Kahan, James P. *See* **Rapoport, Amnon; et al., (81f:90127)**
Orlov, A. I. ★Устойчивость в социально-экономических моделях. (Russian) [Stability in socio-economic models] **(81g:62181)**
Rapoport, Amnon (*with* Kahan, James P.; Funk, Sandra G.; Horowitz, Abraham D.) ★Coalition formation by sophisticated players. **(81f:90127)**

90–03 Historical (must also be assigned at least one classification number from Section 01)

secondary classifications:

(Fulkerson, Delbert Ray) *See* **Hoffman, Alan J., (81e:01024b)**
Hoffman, Alan J. D. R. Fulkerson's contributions to polyhedral combinatorics. **(81e:01024b)**

90–04 Explicit machine computation and programs (not the theory of computation or programming)

secondary classifications:

Adel'son-Vel'skiĭ, G. M. (*with* Arlazarov, V. L.; Donskoĭ, M. V.) ★Программирование игр. (Russian) [Game programming] **(81b:68106)**
Arlazarov, V. L. *See* **Adel'son-Vel'skiĭ, G. M.; et al., (81b:68106)**
Donskoĭ, M. V. *See* **Adel'son-Vel'skiĭ, G. M.; et al., (81b:68106)**

90–06 Proceedings, conferences, etc.

(Avula, Xavier J. R.) *See* **Proceedings: International Conference on Mathematical Modeling, 81i:90005**
(Ballester, A.) *See* **Proceedings: World Conference on Mathematics at the Service of Man, 81m:90003a** *and* **Proceedings: World Conference on Mathematics at the Service of Man, 81m:90003b**
(Batle, N.) *See* **Proceedings: World Conference on Mathematics at the Service of Man, 81m:90003a** *and* **Proceedings: World Conference on Mathematics at the Service of Man, 81m:90003b**
(Bel'tjukov, B. A.) *See* **Questions in applied mathematics, 81a:90008**
(Berljand, E. L.) *See* **Models and methods of investigating economic systems, 81a:90006**
(Brams, Steven J.) *See* **Applied game theory, 81c:90001**
(Brockhoff, K.) *See* **Proceedings: Operations Research, 81e:90003a**
(Cypkin, Ja. Z.) *See* **Control of technical and organizational systems by application of computer technology, 81e:90001**
(Dinkelbach, W.) *See* **Proceedings: Operations Research, 81e:90003a**
(von Dobschütz, L.) *See* **Proceedings: Operations Research, 81e:90003c**
(Ermol'ev, Ju. M.) *See* **Methods in operations research and reliability theory in systems of analysis, 81m:90001**
(Evtušenko, Ju. G.) *See* **Operations research (models, systems, solutions), 81d:90002**
(Fandel, Günter) *See* **Multiple criteria decision making, theory and application, 81c:90002**
(Fleischmann, B.) *See* **Proceedings: Operations Research, 81e:90003c**
(Gaede, K.-W.) *See* **Proceedings: Operations Research, 81e:90003b**
(Gál, Tomáš) *See* **Multiple criteria decision making, theory and application, 81c:90002**
(Hanika, F. de P.) *See* **Progress in cybernetics and systems research, 81i:90006**
(Kall, Peter) *See* **Proceedings: Operations Research, 81e:90003a** *and* **Recent results in stochastic programming, 81i:90008**
(Kanlovskiĭ, Ju. M.) *See* **Methods in operations research and reliability theory in systems of analysis, 81m:90001**
(Kolečaja, V. A.) *See* **Stochastic optimization models, 81e:90004**
(Kovalenko, Ĭ. M.) *See* **Methods in operations research and reliability theory in systems of analysis, 81m:90001**
(Kravčenko, V. E.) *See* **Processing of software and hardware for automatic control systems, 81a:90007**
(Kriens, Jacobus) *See* **Convex analysis and mathematical economics, 81j:90001**
(Litvak, B. G.) *See* **Expert estimates, 81f:90001**
(Liu, Pan Tai) *See* **Dynamic optimization and mathematical economics, 81a:90001**
(Mahmudov, Ju. A.) *See* **Questions of engineering cybernetics, 81i:90007**
(Mamatov, Ju. A.) *See* **Heuristic algorithms of optimization, 81a:90004**
(Manlja, G. M.) *See* **Mathematical methods in economic research, 81i:90004**
(Mirkin, B. G.) *See* **Models and methods of investigating economic systems, 81a:90006**
(Mohler, R. R.) *See* **Recent developments in variable structure systems, economics and biology, 81f:90002**
(Nenashov, É. I.) *See* **Theory of optimal decisions, 81d:90003**
(Pečerskiĭ, Ju. N.) *See* **Mathematical modeling of planning and control processes, 81g:90003**
(Pichler, Franz R.) *See* **Progress in cybernetics and systems research, 81i:90006**
(Prékopa, András) *See* **Survey of mathematical programming, 81g:90004a; Survey of mathematical programming, 81g:90004b; Survey of mathematical programming, 81g:90004c; Recent results in stochastic programming, 81i:90008** *and* **Studies on mathematical programming, 81i:90009**
(Pressmar, D. B.) *See* **Proceedings: Operations Research, 81e:90003a** *and* **Proceedings: Operations Research, 81e:90003b**
(Rayward-Smith, V. J.) *See* **Combinatorial optimization, 81i:90003**
(Ruberti, A.) *See* **Recent developments in variable structure systems, economics and biology, 81f:90002**
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(Schotter, A.) *See* **Applied game theory, 81c:90001**
(Schuster, K.-P.) *See* **Proceedings: Operations Research, 81e:90003b**
(Schwarze, J.) *See* **Proceedings: Operations Research, 81e:90003c**
(Schwödiauer, G.) *See* **Applied game theory, 81c:90001**
(Seifert, O.) *See* **Proceedings: Operations Research, 81e:90003b**
(Šimel'fenig, O. V.) *See* **Mathematical models of behavior, 81a:90005**
(Skurihin, V. I.) *See* **Processing of software and hardware for automatic control systems, 81a:90007**
(Spicher, K.) *See* **Proceedings: Operations Research, 81e:90003a**
(Steckhan, H.) *See* **Proceedings: Operations Research, 81e:90003c**
(Tjurin, Ju. N.) *See* **Expert estimates, 81f:90001**
(Trillas Ruiz, Enrique) *See* **Proceedings: World Conference on Mathematics at the Service of Man, 81m:90003a** *and* **Proceedings: World Conference on Mathematics at the Service of Man, 81m:90003b**
(Tukalevs'ka, N. Ĭ.) *See* **Processing of software and hardware for automatic control systems, 81a:90007**
Applied game theory ★Applied game theory. **81c:90001**
Applied mathematics ★Вопросы прикладной математики. (Russian) [Questions in applied mathematics] **81a:90008**
Automatic control systems ★Разработка математических и технических средств автоматизированных систем управления. (Russian) [Processing of software and hardware for automatic control systems] **81a:90007**
Barcelona ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. I. **81m:90003a**
★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. **81m:90003b**
Berlin ★Proceedings in Operations Research. 8. (German) **81e:90003b**
Budapest ★Survey of mathematical programming. Vol. 1. **81g:90004a**
★Survey of mathematical programming. Vol. 2. **81g:90004b**
★Survey of mathematical programming. Vol. 3. **81g:90004c**
Combinatorial optimization ★Combinatorial optimization. II. **81i:90003**
Computer technology ★Управление техническими и организационными системами с применением вычислительной техники. (Russian) [Control of technical and organizational systems by application of computer technology] **81e:90001**
Conference:
Applied Game Theory ★Applied game theory. **81c:90001**
Combinatorial Optimization ★Combinatorial optimization. II. **81i:90003**
Mathematical Modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **81i:90005**
Mathematical Programming ★Studies on mathematical programming. **81i:90009**
Mathematics at the Service of Man ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. 1. **81m:90003a**
★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. **81m:90003b**
Multiple Criteria Decision Making, Theory and Application ★Multiple criteria decision making, theory and application. **81c:90002**
Control processes ★Математическое моделирование процессов планирования и управления. (Russian) [Mathematical modeling of planning and control processes] **81g:90003**
Control of technical and organizational systems by application of computer technology ★Управление техническими и организационными системами с применением вычислительной техники. (Russian) [Control of technical and organizational systems by application of computer technology] **81e:90001**
Convex analysis and mathematical economics ★Convex analysis and mathematical economics. **81j:90001**
Cybernetics ★Progress in cybernetics and systems research. Vol. VII. **81i:90006**
Decision making ★Multiple criteria decision making, theory and application. **81c:90002**
Dynamic optimization and mathematical economics ★Dynamic optimization and mathematical economics. **81a:90001**
Economic systems ★Модели и методы исследования экономических систем. (Russian) [Models and methods of investigating economic systems] **81a:90006**
Economics ★Dynamic optimization and mathematical economics. **81a:90001**
Engineering cybernetics ★Вопросы технической кибернетики. (Russian) [Questions of engineering cybernetics] **81i:90007**
Expert estimates ★Экспертные оценки. (Russian) [Expert estimates] **81f:90001**
Fort Lee, Va. ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. **81m:90002**
Game theory ★Applied game theory. **81c:90001**
Hagen ★Multiple criteria decision making, theory and application. **81c:90002**
Heuristic algorithms of optimization ★Эвристические алгоритмы оптимизации. (Russian) [Heuristic algorithms of optimization] **81a:90004**
Kiel ★Proceedings in Operations Research. 7. (German) **81e:90003a**
Königswinter ★Multiple criteria decision making, theory and application. **81c:90002**
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Mathematical methods in economic research ★Математические методы в экономических исследованиях. (Russian) [Mathematical methods in economic research] **81i:90004**
Mathematical modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **81i:90005**
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Mathematical programming ★Survey of mathematical programming. Vol. 1. **81g:90004a**
★Survey of mathematical programming. Vol. 2. **81g:90004b**
★Survey of mathematical programming. Vol. 3. **81g:90004c**
★Studies on mathematical programming. **81i:90009**
Mátrafüred ★Studies on mathematical programming. **81i:90009**
Meeting:
AMASES ★Atti del Primo Convègno A.M.A.S.E.S. (Italian) [Proceedings of the First AMASES Meeting] **81e:90002**
Deutsche Gesellschaft für Operations Research ★Proceedings in Operations Research. 7. (German) **81e:90003a**
★Proceedings in Operations Research. 8. (German) **81e:90003b**
★Proceedings in Operations Research. 9. (German) **81e:90003c**
Stochastic Programming ★Recent results in stochastic programming. **81i:90008**
Methods in operations research and reliability theory in systems of analysis ★Методы исследования операций и теории надежности в анализе систем. (Russian) [Methods in operations research and reliability theory in systems of analysis] **81m:90001**

Modeling ★Математическое моделирование процессов планирования и управления. (Russian) [Mathematical modeling of planning and control processes] **81g:90003**
Models and methods of investigating economic systems ★Модели и методы исследования экономических систем. (Russian) [Models and methods of investigating economic systems] **81a:90006**
Multiple criteria decision making, theory and application ★Multiple criteria decision making, theory and application. **81c:90002**
Norwich ★Combinatorial optimization. II. **81i:90003**
Oberwolfach ★Recent results in stochastic programming. **81i:90008**
Operations research ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. **81m:90002**
★Proceedings in Operations Research. 7. (German) **81e:90003a**
★Proceedings in Operations Research. 8. (German) **81e:90003b**
★Методы исследования операций и теории надежности в анализе систем. (Russian) [Methods in operations research and reliability theory in systems of analysis] **81m:90001**
★Proceedings in Operations Research. 9. (German) **81e:90003c**
Operations research (models, systems, solutions) ★Исследование операций (модели, системы, решения). Вып. 7. (Russian) [Operations research (models, systems, solutions). No. 7] **81d:90002**
Optimal decisions ★Теория оптимальных решений. (Russian) [Theory of optimal decisions] **81d:90003**
Optimization ★Эвристические алгоритмы оптимизации. (Russian) [Heuristic algorithms of optimization] **81a:90004**
★Dynamic optimization and mathematical economics. **81a:90001**
★Combinatorial optimization. II. **81i:90003**
Pisa ★Atti del Primo Convègno A.M.A.S.E.S. (Italian) [Proceedings of the First AMASES Meeting] **81e:90002**
Proceedings:
AMASES Meeting ★Atti del Primo Convègno A.M.A.S.E.S. (Italian) [Proceedings of the First AMASES Meeting] **81e:90002**
Annual U.S. Army Operations Research Symposium ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. **81m:90002**
International Conference on Mathematical Modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **81i:90005**
Operations Research ★Proceedings in Operations Research. 7. (German) **81e:90003a**
★Proceedings in Operations Research. 8. (German) **81e:90003b**
★Proceedings in Operations Research. 9. (German) **81e:90003c**
World Conference on Mathematics at the Service of Man ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. 1. **81m:90003a**
★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. **81m:90003b**
Processing of software and hardware for automatic control systems ★Разработка математических и технических средств автоматизированных систем управления. (Russian) [Processing of software and hardware for automatic control systems] **81a:90007**
Progress in cybernetics and systems research ★Progress in cybernetics and systems research. Vol. VII. **81i:90006**
Questions in applied mathematics ★Вопросы прикладной математики. (Russian) [Questions in applied mathematics] **81a:90008**
Questions of engineering cybernetics ★Вопросы технической кибернетики. (Russian) [Questions of engineering cybernetics] **81i:90007**
Recent developments in variable structure systems, economics and biology ★Recent developments in variable structure systems, economics and biology. **81f:90002**
Recent results in stochastic programming ★Recent results in stochastic programming. **81i:90008**
Regensburg ★Proceedings in Operations Research. 9. (German) **81e:90003c**
St. Louis, Mo. ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **81i:90005**
Seminar:
US-Italy, Recent Developments in Variable Structure Systems, Economics and Biology ★Recent developments in variable structure systems, economics and biology. **81f:90002**
Stochastic optimization models ★Стохастические модели оптимизации. (Russian) [Stochastic optimization models] **81e:90004**
Stochastic programming ★Recent results in stochastic programming. **81i:90008**
Studies on mathematical programming ★Studies on mathematical programming. **81i:90009**
Survey of mathematical programming ★Survey of mathematical programming. Vol. 1. **81g:90004a**
★Survey of mathematical programming. Vol. 2. **81g:90004b**
★Survey of mathematical programming. Vol. 3. **81g:90004c**
Symposium:
Convex Analysis and Mathematical Economics ★Convex analysis and mathematical economics. **81j:90001**
Mathematical Programming ★Survey of mathematical programming. Vol. 1. **81g:90004a**
★Survey of mathematical programming. Vol. 2. **81g:90004b**
★Survey of mathematical programming. Vol. 3. **81g:90004c**
U.S. Army, Operations Research ★Final Proceedings of the Sixteenth Annual U.S. Army Operations Research Symposium. Vol. I, II. **81m:90002**
Systems ★Recent developments in variable structure systems, economics and biology. **81f:90002**
★Управление техническими и организационными системами с применением вычислительной техники. (Russian) [Control of technical and organizational systems by application of computer technology] **81e:90001**
Systems research ★Progress in cybernetics and systems research. Vol. VII. **81i:90006**
Taormina ★Recent developments in variable structure systems, economics and biology. **81f:90002**
Theory of optimal decisions ★Теория оптимальных решений. (Russian) [Theory of optimal decisions] **81d:90003**
Tilburg ★Convex analysis and mathematical economics. **81j:90001**
Vienna ★Applied game theory. **81c:90001**

secondary classifications:

(Apostolakis, G.) *See* **Synthesis and analysis methods for safety and reliability studies, (81j:93008)**
(Aškenazy, V. O.) *See* **Differential, noncooperative, cooperative and statistical games, (81m:90110)**
(Bakule, Lubomir) *See* **Symposium: Formator, Mathematical Methods for the Analysis of Large-Scale Systems, (81j:93007)**
(Barritt, Marjorie M.) *See* **Compstat 1980, (81j:62007)**
(Beneš, Jiří) *See* **Symposium: Formator, Mathematical Methods for the Analysis of Large-Scale Systems, (81j:93007)**
(Benkö, Iosif) *See* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006a)** *and* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006b)**
(Čekalin, A. N.) *See* **Programming and numerical methods, (81j:65012)**
(Četaev, N. G.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
(Cottle, Richard W.) *See* **Variational inequalities and complementarity problems, (81d:49001)**
(Dekker, L.) *See* **Simulation of systems '79, (81j:68009)**
(Dempster, M. A. H.) *See* **Stochastic programming, (81j:90094)**
(Ermolin, E. V.) *See* **Programming and numerical methods, (81j:65012)**
(Garribba, S.) *See* **Synthesis and analysis methods for safety and reliability studies, (81j:93008)**
(Giannessi, F.) *See* **Variational inequalities and complementarity problems, (81d:49001)**
(Guirsáim Martín, Alfonso) *See* **Contributions in probability and mathematical statistics, teaching of mathematics and analysis, (81d:00001)**
(Iracki, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(König, Heinz) *See* **Mathematical programming at Oberwolfach, (81k:49001)**
(Korte, Bernhard) *See* **Mathematical programming at Oberwolfach, (81k:49001)**
(Lions, Jacques-Louis) *See* **Variational inequalities and complementarity problems, (81d:49001)**
(Malanowski, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Matrosov, V. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
(Pančenkov, A. M.) *See* **Problems of stability of motion, analytical mechanics and control of motion, (81e:93002)**
(Ritter, Klaus) *See* **Mathematical programming at Oberwolfach, (81k:49001)**
(Robinson, Stephen M.) *See* **Analysis and computation of fixed points, (81j:65003)**
(Romanovskiĭ, I. V.) *See* **Operations research and statistical simulation, (81e:65002)**
(Savastano, G.) *See* **Simulation of systems '79, (81j:68009)**
(Ščerbakov, B. A.) *See* **Contemporary questions of applied mathematics and programming, (81a:00008)**
(Simionescu, Claudia Lidia) *See* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006a)** *and* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006b)**
(Singh, Madan G.) *See* **Handbook: Large scale systems engineering applications, (81d:93004)**
(Sydow, Achim) *See* **Systems analysis and simulation, (81j:93009)**
(Titli, André) *See* **Handbook: Large scale systems engineering applications, (81d:93004)**
(Vansteenkiste, G. C.) *See* **Simulation of systems '79, (81j:68009)**
(Volta, G.) *See* **Synthesis and analysis methods for safety and reliability studies, (81j:93008)**
(Waluklewicz, S.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Wishart, David) *See* **Compstat 1980, (81j:62007)**
All-Union Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Problems of Theoretical Cybernetics ★IV Всесоюзная конференция по проблемам теоретической кибернетики. (Russian) [Fourth All-Union Conference on Problems of Theoretical Cybernetics] **(81b:93001)**
Analysis and computation of fixed points ★Analysis and computation of fixed points. **(81j:65003)**
Analytical mechanics ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Anniversary:
Birth of N. G. Četaev ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Applications of mathematics in system theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Applied mathematics ★Современные вопросы прикладной математики и программирования. (Russian) [Contemporary questions of applied mathematics and programming] **(81a:00008)**
Berlin ★Systems analysis and simulation, 1980. **(81j:93009)**

Brașov ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Complementarity problems ★Variational inequalities and complementarity problems. **(81d:49001)**
Compstat ★Compstat 1980. **(81j:62007)**
Computational statistics ★Compstat 1980. **(81j:62007)**
Conference:
Četaev, Stability of Motion, Analytical Mechanics and Control of Motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Mathematical Programming ★Mathematical programming at Oberwolfach. **(81k:49001)**
Stochastic Programming ★Stochastic programming. **(81j:90094)**
Congress:
IMACS, Simulation of Systems ★Simulation of systems '79. **(81j:68009)**
Contemporary questions of applied mathematics and programming ★Современные вопросы прикладной математики и программирования. (Russian) [Contemporary questions of applied mathematics and programming] **(81a:00008)**
Contributions in probability and mathematical statistics, teaching of mathematics and analysis ★Contribuciones en probabilidad y estadística matemática, enseñanza de la matemática y análisis. (Spanish) [Contributions in probability and mathematical statistics, teaching of mathematics and analysis] **(81d:00001)**
Control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Cybernetics ★IV Всесоюзная конференция по проблемам теоретической кибернетики. (Russian) [Fourth All-Union Conference on Problems of Theoretical Cybernetics] **(81b:93001)**
Differential, noncooperative, cooperative and statistical games ★Дифференциальные, бескоалиционные, кооперативные и статистические игры. (Russian) [Differential, noncooperative, cooperative and statistical games] **(81m:90110)**
Edinburgh ★Compstat 1980. **(81j:62007)**
Erice ★Variational inequalities and complementarity problems. **(81d:49001)**
Fixed points ★Analysis and computation of fixed points. **(81j:65003)**
Games ★Дифференциальные, бескоалиционные, кооперативные и статистические игры. (Russian) [Differential, noncooperative, cooperative and statistical games] **(81m:90110)**
Handbook:
Large scale systems engineering applications ★Handbook of large scale systems engineering applications. **(81d:93004)**
IFIP Conference:
Optimization Techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
Inequalities ★Variational inequalities and complementarity problems. **(81d:49001)**
Irkutsk ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Large-scale systems ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. **(81j:93007)**
Large scale systems engineering ★Handbook of large scale systems engineering applications. **(81d:93004)**
Liblice ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. **(81j:93007)**
Madison, Wis. ★Analysis and computation of fixed points. **(81j:65003)**
Mathematical programming at Oberwolfach ★Mathematical programming at Oberwolfach. **(81k:49001)**
NATO Advanced Study Institute:
Synthesis and Analysis Methods for Safety and Reliability Studies ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
Novosibirsk ★IV Всесоюзная конференция по проблемам теоретической кибернетики. (Russian) [Fourth All-Union Conference on Problems of Theoretical Cybernetics] **(81b:93001)**
Numerical methods ★Программирование и численные методы. (Russian) [Programming and numerical methods] **(81j:65012)**
Oberwolfach ★Mathematical programming at Oberwolfach. **(81k:49001)**
Operations research and statistical simulation ★Исследование операций и статистическое моделирование. Вып. 5. (Russian) [Operations research and statistical simulation. No. 5] **(81e:65002)**
Optimization techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
Oxford ★Stochastic programming. **(81j:90094)**
Probability ★Contribuciones en probabilidad y estadística matemática, enseñanza de la matemática y análisis. (Spanish) [Contributions in probability and mathematical statistics, teaching of mathematics and analysis] **(81d:00001)**
Problems of stability of motion, analytical mechanics and control of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Proceedings:
International Symposium on Applications of Mathematics in System Theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Programming ★Современные вопросы прикладной математики и программирования. (Russian) [Contemporary questions of applied mathematics and programming] **(81a:00008)**
★Mathematical programming at Oberwolfach. **(81k:49001)**
Programming and numerical methods ★Программирование и численные методы. (Russian) [Programming and numerical methods] **(81j:65012)**
Reliability studies ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
School:
Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics ★Variational inequalities and complementarity problems. **(81d:49001)**
Simulation of systems '79 ★Simulation of systems '79. **(81j:68009)**
Sorrento ★Simulation of systems '79. **(81j:68009)**
Stability of motion ★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **(81e:93002)**
Statistical simulation ★Исследование операций и статистическое моделирование. Вып. 5. (Russian) [Operations research and statistical simulation. No. 5] **(81e:65002)**
Statistics ★Contribuciones en probabilidad y estadística matemática, enseñanza de la matemática y análisis. (Spanish) [Contributions in probability and mathematical statistics, teaching of mathematics and analysis] **(81d:00001)**
Stochastic programming ★Stochastic programming. **(81j:90094)**
Symposium:
Analysis and Computation of Fixed Points ★Analysis and computation of fixed points. **(81j:65003)**
Applications of Mathematics in System Theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Computational Statistics ★Compstat 1980. **(81j:62007)**
Formator, Mathematical Methods for the Analysis of Large-Scale Systems ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. **(81j:93007)**
Systems Analysis and Simulation ★Systems analysis and simulation, 1980. **(81j:93009)**
Synthesis and analysis methods for safety and reliability studies ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
System theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Systems analysis and simulation ★Systems analysis and simulation, 1980. **(81j:93009)**
Systems engineering ★Handbook of large scale systems engineering applications. **(81d:93004)**
Urbino ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
Variational inequalities and complementarity problems ★Variational inequalities and complementarity problems. **(81d:49001)**
Warsaw ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**

90Axx Mathematical economics {For econometrics, see 62P20.}

(Cooper, William Wager) *See* **Quantitative planning and control, 81b:90002**
(Green, Jerry R.) *See* **General equilibrium, growth, and trade, 81m:90004**
(Ijiri, Yuji) *See* **Quantitative planning and control, 81b:90002**
(McKenzie, Lionel) *See* **General equilibrium, growth, and trade, 81m:90004**
Roberts, Fred S. ★Measurement theory. **81b:90003**
(Scheinkman, José Alexandre) *See* **General equilibrium, growth, and trade, 81m:90004**
(Whinston, Andrew B.) *See* **Quantitative planning and control, 81b:90002**
Birthday:
Cooper, William Wager ★Quantitative planning and control. **81b:90002**
Economic theory ★General equilibrium, growth, and trade. **81m:90004**
General equilibrium, growth, and trade ★General equilibrium, growth, and trade. **81m:90004**
Planning and control ★Quantitative planning and control. **81b:90002**
Quantitative planning and control ★Quantitative planning and control. **81b:90002**

secondary classifications:

Chatterji, M. Spatial modeling. **(81k:00010)**

90A05 Decision theory [See also 62Cxx, 90B50, 90D35.]

Adamo, J. M. Fuzzy decision trees. **81k:90002**
Akbari, Alireza (*with* Hess, James; Kagiwada, Harriet; Kalaba, Robert) The equivalence of team theory's integral equations and a Cauchy system: sensitivity analysis of a variational problem. **81c:90003**
Ang, James S. (*with* Chua, Jess H.) Coalitions, the me-first rule, and the liquidation decision. **81e:90005**
Arbel, Ami (*with* Tse, Edison) Aggregation and information structuring in large-scale dynamic systems. **81m:90005**
Bagrinovskiĭ, K. A. (*with* Busygin, V. P.) ★Математика плановых решений. (Russian) [Mathematics of planning decisions] **81i:90010**
Baligh, Helmy H. (*with* Damon, William W.) Foundations for a systematic process of organization structure design. **81h:90003**
Barcón, Jaime Maximin as a criterion of distribution. (Spanish. English summary) **81a:90009**
Barros, Oscar (*with* Gomez, Alejandro) Decision support systems for economic policy analysis in a market oriented environment. (*See* **81i:68009**)
Bieluszko, Adam Task allocation in two-level systems with conflicting goals. **81m:90006**
Bonissone, Piero P. *See* **Tong, Richard M., 81m:90008**
Brooks, Daniel G. *See* **Winkler, Robert L., 81d:90005**

Buygin, V. P. *See* **Bagrinovskiĭ, K. A., 81i:90010**
Čáha, Jaroslav Systematic forming of complex variants—assumption for optimization and decision making. (Czech. English summary) **81h:90004**
Cheng, Yuen Yee M. (*with* McInnis, Bayliss) An algorithm for multiple attribute, multiple alternative decision problems based on fuzzy sets with application to medical diagnosis. **81k:90001**
Chu, Jess H. *See* **Ang, James S., 81e:90005**
Clements, D. L. A note on exchange rate dynamics. **81g:90005**
Constantinides, George M. Multiperiod consumption and investment behavior with convex transactions costs. **81b:90004**
Czap, Hans The dependency of automatically designed multicriterion decisions on scale transformations. **81j:90002**
Duncan, William W. *See* **Baligh, Helmy H., 81h:90003**
Delgado Calvo-Flores, Miguel Note on multistage decision processes in a fuzzy environment. (Spanish) **81i:90011**
Dubois, Didier (*with* Prade, Henri M.) Decision-making under fuzziness. **81f:90003**
Ellsworth, Leon Decision-theoretic analysis of Rawls' original position. **81g:90006**
Enelow, James M. Strategic manipulation and the use of individual decision rules. **81a:90010**
Fandel, Günter Perspectives of the development in multiple criteria decision making. (*See* **81c:90002**)
Fielitz, Bruce D. *See* **Greene, Myron T., 81a:90011**
Fronistas, Aristides C. Economic models of decisions with respect to contract structure. **81i:90012**
Garstka, S. *See* **Mensching, J.; et al., 81a:90013**
Gehrlein, William V. "Problem specialization" in mechanical decision processes. (French summary) **81k:90002**
Gomez, Alejandro *See* **Barros, Oscar,** (*See* **81i:68009**)
Greene, Myron T. (*with* Fielitz, Bruce D.) The effect of long term dependence on risk-return models of common stocks. **81a:90011**
Henry, C. (*with* Zylberberg, A.) Planning algorithms to deal with increasing returns. **81f:90004**
Hess, James *See* **Akbari, Alireza; et al., 81c:90003** *and* **Kalaba, Robert; et al., 81f:90005**
(Hooker, C. A.) *See* **Foundations and applications of decision theory, 81a:90002a** *and* **Foundations and applications of decision theory, 81a:90002b**
Ivanenko, V. I. (*with* Labkovskiĭ, V. A.) A form of indeterminacy. (Russian) **81b:90005**
Jeffrey, Richard C. Axiomatizing the logic of decision. **81e:90006**
Kagiwada, Harriet *See* **Akbari, Alireza; et al., 81c:90003** *and* **Kalaba, Robert; et al., 81f:90005**
Kalaba, Robert (*with* Hess, James; Kagiwada, Harriet) Command, control, communication and team decision theory. **81f:90005**
See also **Akbari, Alireza; et al., 81c:90003**
Karni, Edi On multivariate risk aversion. **81b:90006**
Kickert, Walter J. M. ★Fuzzy theories on decision-making. **81f:90006**
Kinberg, Yoram (*with* Rao, Ambar G.; Sudit, Ephraim F.) Optimal resource allocation between spot and package demands. **81j:90003**
Labkovskiĭ, V. A. *See* **Ivanenko, V. I., 81b:90005**
Laffont, Jean-Jacques (*with* Saint-Pierre, Patrick) Planning with externalities. **81c:90004**
(Leach, J. J.) *See* **Foundations and applications of decision theory, 81a:90002a** *and* **Foundations and applications of decision theory, 81a:90002b**
Leung, Yee A fuzzy set procedure for project selection with hierarchical objectives. **81i:90013**
Levi, Isaac Irrelevance. **81h:90005**
Luce, R. Duncan Several possible measures of risk. **81m:90007**
Maskin, Eric Decision-making under ignorance with implications for social choice. **81g:90007**
(McClennen, Edward F.) *See* **Foundations and applications of decision theory, 81a:90002a** *and* **Foundations and applications of decision theory, 81a:90002b**
McInnis, Bayliss *See* **Cheng, Yuen Yee M., 81k:90001**
Mensching, J. (*with* Garstka, S.; Morton, T.) Protective planning-horizon procedures for a deterministic cash balance problem. **81a:90013**
Milgrom, Paul R. A convergence theorem for competitive bidding with differential information. **81a:90014**
Morkeliūnas, A. Decision-making indeterminacy with respect to lexicographic-type criteria. (Russian. Lithuanian and English summaries) **81k:90003**
Morton, T. *See* **Mensching, J.; et al., 81a:90013**
Nakayama, Hirotaka (*with* Tanino, Tetsuzoh; Sawaragi, Yoshikazu) An interactive optimization method in multicriteria decision making. **81a:90015**
Neave, Edwin H. (*with* Petersen, Edward R.) A comparison of optimal and adaptive decision mechanisms in an organizational setting. **81j:90004**
Orlovskiĭ, S. A. On formalization of a general fuzzy mathematical problem. **81d:90004**
Papadopoulos, Nicholas M. The garbling decision maker: a model of bounded rationality. **81f:90007**
Petersen, Edward R. *See* **Neave, Edwin H., 81j:90004**
Prade, Henri M. *See* **Dubois, Didier, 81f:90003**
Rao, Ambar G. *See* **Kinberg, Yoram; et al., 81j:90003**
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Sakawa, Masatoshi (*with* Sasakura, Takayuki) Interactive multiobjective decision making: SPOT. (Japanese. English summary) **81k:90004**
Sasakura, Takayuki *See* **Sakawa, Masatoshi, 81k:90004**
Sawaragi, Yoshikazu *See* **Nakayama, Hirotaka; et al., 81a:90015**
Starrett, David A. Marginal cost pricing of recursive lumpy investments. **81a:90017**
Stewart, T. J. A descriptive approach to multiple-criteria decision making. **81k:90005**
Sudit, Ephraim F. *See* **Kinberg, Yoram; et al., 81j:90003**
Takatsu, S. Characterization of a linear decision rule. **81k:90006**
Tanino, Tetsuzoh *See* **Nakayama, Hirotaka; et al., 81a:90015**
Tong, Richard M. (*with* Bonissone, Piero P.) A linguistic approach to decision making with fuzzy sets. **81m:90008**
Tse, Edison *See* **Arbel, Ami, 81m:90005**
Vargas, Luis G. A note on the eigenvalue consistency index. **81j:90005**
Walker, Mark A generalization of the maximum theorem. **81i:90014**
Whitt, Ward A priori bounds for approximations of Markov programs. **81h:90008**
Winkler, Robert L. (*with* Brooks, Daniel G.) Competitive bidding with dependent value estimates. **81d:90005**
Yager, Ronald R. Satisfaction and fuzzy decision functions. **81m:90009**
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Beddington, J. R. (*with* May, Robert M.) Maximum sustainable yields in systems subject to harvesting at more than one trophic level. (81k:92047)
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Delebecque, François (*with* Quadrat, J. P.) Application of stochastic control methods in the management of hydro power production. (*See* 81l:90005)
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Frisman, E. Ja. *See* Skaleckaja, E. I.; et al., (81f:92001)
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Hlamova, T. A. *See* Stecenko, V. Ja., (81m:90037)
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Hu, Sheng Cheng On the dynamic behaviour of the consumer and the optimal provision of social security. (81c:90025)
Ikuta, Taneo Growth, employment and inflation. (81b:90045)
Kacprzyk, Janusz (*with* Straszak, Andrzej) Application of fuzzy decision-making models

for determining optimal policies in "stable" integrated regional development. **(81i:90047)**

Kapur, J. N. The effect of harvesting on competing populations. **(81j:92035)**

Karni, Edi Collective rationality, unanimity and liberal ethics. **(81c:90012)**

Keeney, Ralph L. Utility functions for equity and public risk. **(81f:90020)**

Krueger, Robert J. *See* **Dauer, Jerald P., (81g:90061)**

Kruś, L. (*with* Libura, M.; Słomiński, Leon) Resource distribution combinatorial models in air pollution problems. *(See* **81j:49001b)**

Lapidus, I. Richard Microbial chemotaxis in flowing water in the vicinity of a source of attractant or repellent. **(81f:92030)**

Leitmann, George *See* **Chen, Santiago Fei Hung, (81g:90106)**

Levhari, David (*with* Mirman, Leonard J.) The great fish war: an example using a dynamic Cournot-Nash solution. **(81e:90023)**

Libura, M. *See* **Kruś, L.; et al., (***See* **81j:49001b)**

Liu, Pan Tai Optimum extraction of an exhaustible resource: a mathematical analysis. **(81g:90020)**

Loucks, Daniel P. Discrete chance constrained models for river basin planning. (*See* **81j:90094)**

May, Robert M. *See* **Beddington, J. R., (81k:92047)**

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Mendelssohn, Roy A systematic approach to determining mean-variance tradeoffs when managing randomly varying populations. **(81h:92021)**

Mirman, Leonard J. *See* **Levhari, David, (81e:90023)**

Quadrat, J. P. *See* **Delebecque, François, (***See* **81i:90005)**

Roy, S. On an aspect of optimal resource depletion. **(81d:90021)**

Šapiro, A. P. *See* **Skaleckaja, E. I.; et al., (81f:92001)**

Singh, Madan G. *See* **Hassan, Mohammed F., (81k:93005)**

Skaleckaja, E. I. (*with* Frisman, E. Ja.; Šapiro, A. P.) ★Дискретные модели динамики численности популяций и оптимизация промысла. (Russian) [Discrete models of the dynamics of population size and of optimization of industrial production] **(81f:92001)**

Słomiński, Leon *See* **Kruś, L.; et al., (***See* **81j:49001b)**

Stecenko, V. Ja. (*with* Hlamova, T. A.) A balance model with account taken of rescheduling of detrimental departures. (Russian. Tajiki summary) **(81m:90037)**

Straszak, Andrzej *See* **Kacprzyk, Janusz, (81i:90047)**

Vasil'ev, V. B. *See* **Vavilin, V. A., (81d:92003)**

Vavilin, V. A. (*with* Vasil'ev, V. B.) ★Математическое моделирование процессов биологической очистки сточных вод активным илом. (Russian) [Mathematical modeling of processes of biological treatment of sewage by activated sludge] **(81d:92003)**

Logico-methodological problems of the natural sciences and the social sciences

★Логико-методологические проблемы естественных и общественных наук. (Russian) [Logico-methodological problems of the natural sciences and the social sciences] **(81c:00010)**

90A99 None of the above, but in this section

Benedetti, Carlo On some indexes of inequality of welfare. (Italian. English and French summaries) **81k:90027**

Blackorby, Charles (*with* Primont, Daniel) Index numbers and consistency in aggregation. **81a:90070**

Chary, L. R. (*with* Nachane, D. M.) Stabilization policies in Phillips' multiplier accelerator model. (*See* **81m:90003b)**

Donaldson, David (*with* Weymark, John A.) A single-parameter generalization of the Gini indices of inequality. **81a:90072**

Drenick, R. F. Modeling man in economics and system theory. (*See* **81j:49001a)**

Jones, Ronald W. *See* **Noman, Kamran, (***See* **81m:90004)**

Kantorovič, L. V. The importance of mathematical optimization in economics. (*See* **81j:49001a)**

Lind, Niels C. Economic activities under public regulation—a thermodynamic analogy. (*See* **80h:00004)**

Nachane, D. M. *See* **Chary, L. R., (***See* **81m:90003b)**

Narasimham, Gorti V. L. Application of cybernetics in economic modelling. (*See* **81m:90003b)**

Noman, Kamran (*with* Jones, Ronald W.) A model of trade and unemployment. (*See* **81m:90004)**

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Neltzel, Lee A. (*with* Hoffman, Lance J.) Fuzzy cost/benefit analysis. **(81i:90120)**

Pjatnickaja, G. N. (*with* Sinicyn, I. G.) Infinite turnpikes in a graph and optimal placement of figures of the same type in an infinite narrow strip. (Russian) **(81d:52013)**

Shimemura, Etsujiro *See* **Uchida, Kenkō, (81m:93091)**

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Stigler, Stephen M. An Edgeworth curiosum. **(81h:62056)**

Stoyan, Dietrich Applied stochastic geometry: a survey (invited paper). (German and Russian summaries) **(81h:60020)**

Tapiero, Charles S. A generalization of the Nerlove-Arrow model to multi-firms advertising under uncertainty. **(81a:90175)**

Uchida, Kenkō (*with* Shimemura, Etsujiro) On a class of linear-quadratic stochastic team control problems. **(81m:93091)**

90Bxx Operations research and management science

Hildebrandt, Steen Implementation—the bottleneck of operations research: the state of the art. **81j:90039**

secondary classifications:

Rochat, Jean-Claude ★Mathématiques pour la gestion de l'environnement. (French) [Mathematics for the management of the environment] **(81j:92001)**

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Aggarwal, S. P. *See* **Goel, Vijay P., 81e:90034**

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Ahmetčin, A. A. Stock control model in a system with one supplier and two consumers. (Russian) **81b:90055**

Arjanin, A. N. (*with* Jakobson, M. V.) The zoning method in distribution problems. (Russian) **81b:90056**

Balcer, Yves Partially controlled demand and inventory control: an additive model. **81g:90038**

Bazaraa, Mokhtar S. (*with* Sherali, Hanif D.) Benders' partitioning scheme applied to a new formulation of the quadratic assignment problem. **81a:90073**

Berrebi, M. *See* **Intrator, Jacob, 81i:90065**

Bhat, Kabekode V. S. (*with* Kinariwala, Bharat) An algorithm for the $n \times n$ optimum assignment problem. **81b:90057**

Bradshaw, A. (*with* Erol, Y.) Control policies for production-inventory systems with bounded input. **81i:90060**

Bur'jan, S. B. Direct method of solving the dynamic problem of developing [deploying] industrial plants. I. **81a:90074**

Carbone, Robert (*with* Mehrez, Abraham) The single facility minimax distance problem under stochastic location of demand. **81i:90061**

Chakravarty, A. K. Multi-item inventory aggregation into groups. **81k:90028**

Chambers, John C. *See* **Smith, Stephen A.; et al., 81i:90068**

Choi, Won Joon A branch and bound algorithm for the multiperiod capacitated facilities location problem. (Korean summary) **81m:90041**

Cohen, Morris A. (*with* Pekelman, Dov) LIFO inventory systems. **81d:90037**

Dave, Upendra *m*-scheduling-period inventory model for deteriorating items with instantaneous demand. **81k:90029**

Deuermeyer, Bryan L. A single period model for a multiproduct perishable inventory system with economic substitution. **81d:90038**

Dhar, U. R. (*with* Rao, J. R.) A comparative study of three norms for facility location problem on spherical surface. **81j:90040**

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Fortuin, Leonard Five popular probability density functions: a comparison in the field of stock-control models. **81i:90062**

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Gabbay, Henry Multistage production planning. **81b:90058**

Galvão, Roberto D. A dual-bounded algorithm for the *p*-median problem. **81i:90064**

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Guignard, Monique Fractional vertices, cuts and facets of the simple plant location problem. **81g:90039**

Hagen, Ole SPATILA: space time Lagrangian allocation of inventory capacity. **81j:90041**

Ho, Yu Chi *See* **Muralidharan, Ramal; et al., 81h:90052**

Infante Macías, Rafael (*with* Vargas González, Luis) Estimates of the resource requirements in network optimization problems. **81g:90040**

Intrator, Jacob (*with* Engelberg, Abraham) Sensitivity analysis as a means of reducing the dimensionality of a certain class of transportation problems. **81g:90041**

(*with* Berrebi, M.) Auxiliary procedures for solving long transportation problems. **81i:90065**

Iri, Masao A practical algorithm for the Menger-type generalization of the independent assignment problem. **81h:90059**

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Jani, B. B. (*with* Jaiswal, M. C.) Order-level lot-size inventory model under the influence of the marketing policy. **81f:90039**

Kacprzyk, Janusz (*with* Stańczak, Wiesław) Optimal location of a central supply point in urban regions. (Polish. Russian and English summaries) **81g:90042**

Kalin, Dieter Zur Optimalität von (s, Z)-Strategien bei Berücksichtigung von Bedarfstrends. (English and Russian summaries) **81g:90043**

On the optimality of (σ, S) policies. **81e:90035**

Kehaloff, Anastas Choix du type de gestion de stock. (English summary) **81b:90060**

Kelle, Péter Optimization of mixture rate and depot capacities for asphalt mixers.

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Chance constrained inventory model for an asphalt mixing problem. **81j:90042**

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Kolberg, Franz ★Zeitdiskrete instationäre Lagerhaltungsmodelle mit Markovschem Preis-Nachfrage-Prozess. (German) [Time-discrete nonstationary inventory models with Markovian price and demand process] **81j:90043**

Kruś, L. (*with* Libura, M.; Słomiński, Leon) Resource distribution combinatorial models in air pollution problems. (*See* **81j:49001b**)

Kruse, W. Karl Waiting time in an S-1, S inventory system with arbitrarily distributed lead times. **81h:90061**

Küenle, Heinz-Uwe (*with* Walter, Lutz) Ein Lagerhaltungsmodell mit kontingentierten Liefermengen. (English and Russian summaries) **81g:90044**

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Love, Charles E. Optimal equipment transfer pricing in service systems. **81g:90046**

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Mahoney, J. F. (*with* Sivazlian, B. D.) Probability of shortage for Erlang distributed demand in a (σ, S) inventory problem. **81e:90036**

Massaria, C. (*with* Senigaglia, E.) On the explicit solution of a manpower staffing problem. (Italian) **81j:90044**

McKeown, Patrick G. Solving incremental quantity discounted transportation problems by vertex ranking. **81h:90049**

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Mehlmann, Alexander An approach to optimal recruitment and transition strategies for manpower systems using dynamic programming. **81j:90045**

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Miethe, Manfred Die Untersuchung der Grenzverteilung des körperlichen Bestandsprozesses in einem semi-Markovschen Lagerhaltungsmodell. (English and Russian summaries) **81b:90063**
Approximation der optimalen Strategieparameter von (σ, S)-Lagerhaltungsmodellen. (English and Russian summaries) **81h:90050**

Minieka, Edward Conditional centers and medians of a graph. **81i:90066**

Mirzahmedov, F. A problem of control of stocks with constraints. (Russian) **81f:90042**

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Morris, James G. (*with* Verdini, William A.) Minisum l_p distance location problems solved via a perturbed problem and Weiszfeld's algorithm. **81b:90064**

Muralidharan, Ramal (*with* Ho, Yu Chi; Luh, Peter B.) Impact of storage on load management by utilities. **81h:90052**

Nagao, Masashi Application of Markov chains to a stochastic reservoir theory for water supply. (Japanese. English summary) **81i:90067**

Namekata, Tsuneyuki (*with* Tabata, Yoshio; Nishida, Toshio) A sequential allocation problem with unknown probabilities of appearance. **81a:90076**

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Panda, Radhamadhab Static inventory model with uncertainty in supply. **81b:90065**

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Pellaumail, Jean Disponibilité d'un ensemble complexe. (English summary) **81k:90053**

Picard, Jean-Claude (*with* Ratliff, H. Donald) A cut approach to the rectilinear distance facility location problem. **81d:90040**

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Rao, J. R. *See* **Dhar, U. R., 81j:90040**

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Ray, W. D. Computation of reorder levels when the demands are correlated and the lead time random. **81k:90031**

Ross, G. Terry (*with* Soland, Richard M.) A multicriteria approach to the location of public facilities. **81g:90047**

Sculli, D. Stock control using the stock level frequency distribution. **81h:90054**

Senigaglia, E. *See* **Massaria, C., 81j:90044**

Shah, Y. K. (*with* Jaiswal, M. C.) Probabilistic scheduling period inventory model for deteriorating items. **81f:90043**

Sherali, Hanif D. *See* **Bazaraa, Mokhtar S., 81a:90073**

Shimosakon, Takio (*with* Kuriyama, Sennosuke) The optimal substitution policy under the substitutable two-commodity inventory system. **81b:90066**

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Smith, Stephen A. (*with* Chambers, John C.; Shlifer, Eli) Optimal inventories based on job completion rate for repairs requiring multiple items. **81i:90068**

Snyder, Ralph D. The safety stock syndrome. **81h:90055**

Soland, Richard M. *See* **Ross, G. Terry, 81g:90047**

Spickenheuer, W. Optimale vorbeugende Instandhaltung. **81g:90048**

Stańczak, Wiesław *See* **Kacprzyk, Janusz, 81g:90042**

Tabata, Yoshio *See* **Namekata, Tsuneyuki; et al., 81a:90076**

Tamura, Takayoshi The status of mathematical inventory theory. I. (Japanese. English summary) **81i:90069**

Tempelmeier, H. Die Bestimmung des optimalen Standorts eines Auslieferungslagers bei entfernungsabhängiger Nachfrage und nichtlinearen Transportkosten. (English summary) **81k:90032**

Tur, L. P. An inventory control model with two alternative decisions. **81d:90041**

Tzafestas, S. G. Deadbeat time-optimal control of production-inventory systems. **81c:90034**
Application of an eigenvalue assignment technique to the control of multivariable production-inventory systems. **81e:90037**

Uličný, Ján (*with* Dráb, Ladislav) Activity of centre of control in decentralized system with hierarchical structure. (*See* **81j:93007**)

Văideanu, Dan On a Markovian inventory model. (French and Russian summaries) **81c:90035**

Van Roy, Tony J. (*with* Gelders, Ludo F.) Solving a distribution problem with side constraints. **81j:90046**

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Waldmann, K.-H. On the optimality of (z, Z)-order-policies in adaptive inventory control. (German summary) **81a:90077**

Walter, Lutz *See* **Küenle, Heinz-Uwe, 81g:90044**

Weiss, Howard J. Optimal ordering policies for continuous review perishable inventory models. **81a:90078**

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Winter, Jeffrey L. *See* **Friedman, Moshe, 81i:90063**

Yajima, Keiji Characteristics of incremental assignment method. (*See* **81j:49001b**)

Zambickiĭ, D. K. *See* **Lozovanu, D. D., 81f:90041**

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Alliney, Stefano (*with* Barnabei, Marilena; Pezzoli, Luigi) W-optimal assignable sets and allocation problems. (Italian summary) **(81c:90055)**

Aly, Adel A. *See* **Litwhiler, Daniel W., (81g:90082)**

Balagopal, K. Some limit theorems for the general semi-Markov storage model. **(81i:60082)**

Barnabei, Marilena *See* **Alliney, Stefano; et al., (81c:90055)**

Bhattacharya, D. D. A Bayesian approach to a renewal function. **(81d:60097)**

Brewer, John W. (*with* Henwood, Ken) A dynamic model of the purchase of gasoline. **(81g:90052)**

Čarin, V. S. *See* **Protasov, I. V.; et al., (81d:90072)**

Čerkašin, A. M. *See* **Rubinštein, M. I., (81h:90080)**

Christofides, Nicos (*with* Mingozzi, Aristide; Toth, Paolo) Contributions to the quadratic assignment problem. **(81a:90133)**

Coffman, E. G., Jr. (*with* Leung, Joseph Y.-T.; Ting, D. W.) Bin packing: maximizing the number of pieces packed. **(81e:68032)**
(*with* So, Kimming; Hofri, Micha; Yao, Andrew Chi Chih) A stochastic model of bin-packing. **(81b:68016)**

Cramer, John G. (*with* Pollatschek, M. A.) Candidate to job allocation problem with a lexicographic objective. **(81b:90141)**

Craven, B. D. *See* **Teo, K. L., (81f:49031)**

Cvetanov, Ilija P. (*with* Dončev, Asen L.; Georgieva, Katja) Method of optimal synthesis of control distributed processes. (Bulgarian. Russian and English summaries) **(81f:90110)**

Derzko, N. (*with* Sethi, Suresh P.; Thompson, Gerald L.) Distributed parameter systems approach to the optimal cattle ranching problem. **(81g:93056)**

Dončev, Asen L. *See* **Cvetanov, Ilija P.; et al., (81f:90110)**

Dron', S. P. *See* **Kovalev, M. M., (81f:90064)**

Eckhardt, Ulrich Weber's problem and Weiszfeld's algorithm in general spaces. **(81h:90123)**

Erickson, Ranel E. (*with* Luss, Hanan) Optimal sizing of records used to store messages of various lengths. **(81i:68031)**

Gavish, Bezalel (*with* Graves, Stephen C.) A one-product production/inventory problem under continuous review policy. **(81i:90098)**

Georgieva, Katja *See* **Cvetanov, Ilija P.; et al., (81f:90110)**

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Hatzopoulos, M. (*with* Kollias, J. G.) Some rules for introducing indexing paths in a primary file. **(81g:68028)**

Heaney, J. P. Efficiency/equity analysis of environmental problems—a game theoretic perspective. **(81d:90132)**

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Hinxman, A. I. The trim-loss and assortment problems: a survey. **(81e:90047)**

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Jeleniewski, Tadeusz (*with* Sibilski, Wojciech) Flow and structural problems in the technical design. (Polish and Russian summaries) **(81e:90042)**

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Kleinrock, Leonard (*with* Kamoun, Farouk) Optimal clustering structures for hierarchical topological design of large computer networks. **(81g:68005)**

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Kovalev, M. M. (*with* Dron', S. P.) Piecewise-linear optimization on unconnected domains. (Russian) **(81f:90064)**

Kuzemin, A. Ja. (*with* Naumeĭko, I. V.) Combinatorial methods for optimization of the distribution of resources. (Russian) **(81j:90018)**

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Sullivan, Robert S. (*with* Hayya, Jack C.) A comparison of the method of bounding distributions (MBD) and Monte Carlo simulation for analyzing stochastic acyclic networks. **81d:90064**
Tankó, József Dominating schedules of steady job-flow pairs. (Hungarian. English summary) **81g:90059**
Dominant schedules of a steady job-flow pair. **81k:90054**
Tapiero, Charles S. *See* **Zuckerman, Dror, 81m:90064**
Tikekar, V. G. *See* **Seshan, C. R., 81h:90081**
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Zinder, Ja. A. Minimization of the maximum penalty in a determined queueing system with identical servers. (Russian) **81b:90095**
Zjuzin-Zinčenko, A. A. Measures of criticality in a network model in the case of limited resources. (Russian) **81d:90065**
Zolotukhin, V. F. On the elimination of solutions of the Bellman-Johnson problem that are known to be nonoptimal. **81a:90103**
Zoltners, Andris A. *See* **Ross, G. Terry; et al., 81m:90063**
Zuckerman, Dror (*with* Tapiero, Charles S.) Random vehicle dispatching with options and optimal fleet size. **81m:90064**

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Abdugaliev, U. A. An extremal problem connected with the distribution of work between collectives. (Russian) **81h:03047**
Bodin, Lawrence D. (*with* Golden, Bruce L.; Schuster, Allan D.; Romig, William) A model for the blocking of trains. **81a:90112**
Bookbinder, James H. (*with* Sethi, Suresh P.) The dynamic transportation problem: a survey. **81a:90081**
Burdjuk, V. Ja. (*with* Deĭneko, V. G.) Solvable cases of the traveling salesman problem with several salesmen. (Russian) **81f:90108**
Carpaneto, Giorgio (*with* Toth, Paolo) Some new branching and bounding criteria for the asymmetric travelling salesman problem. **81i:90193**
Christofides, Nicos (*with* Mingozzi, Aristide; Toth, Paolo) Dynamic loading and unloading of liquids into tanks. **81d:90074**
Coffman, E. G., Jr. (*with* Mitrani, I.) A characterization of waiting time performance realizable by single-server queues. **81g:60090**
Dave, Upendra *m*-scheduling-period inventory model for deteriorating items with instantaneous demand. **81k:90029**
Deineko, V. G. *See* **Burdjuk, V. Ja., 81f:90108**
Demidenko, V. M. The traveling salesman problem with an asymmetric matrix. (Russian. English summary) **81c:05062**
Dokučaev, V. N. Analysis of a network model of delivery control. (Russian) **81d:90042**
(van Emde Boas, P.) *See* **Interfaces between computer science and operations research, 81f:68001**
Engelberg, Abraham *See* **Intrator, Jacob, 81g:90041**
Fuchs, Jean-Jacques J. Discrete adaptive control: a sufficient condition for stability and applications. **81k:93036**
Golden, Bruce L. *See* **Bodin, Lawrence D.; et al., 81a:90112**
Grabowski, Józef An algorithm for the solution of the traveling salesman problem via disjunctive graphs. (Polish) **81j:05062**
Hattori, Mitsuhiro *See* **Kaneko, Asao; et al., 81g:68029**
Il'kev, A. P. *See* **Talanov, V. A., 81e:90065**
Intrator, Jacob (*with* Engelberg, Abraham) Sensitivity analysis as a means of reducing the dimensionality of a certain class of transportation problems. **81g:90041**
Kaneko, Asao (*with* Nishihara, Yoshiyuki; Tsuruoka, Kunitoshi; Hattori, Mitsuhiro) Logical clock synchronization method for duplicated database control. **81g:68029**
Kemper, F. M. An algorithm for formation of the essential constraints of a transport problem with prohibitions. (Russian) **81b:90070**
Leighton, Frank Thomson A graph coloring algorithm for large scheduling problems. **81d:68054**
Lenstra, J. K. (*with* Rinnooy Kan, A. H. G.) Complexity results for scheduling chains on a single machine. **81a:68050**
See also **Interfaces between computer science and operations research, 81f:68001**
Levin, G. M. (*with* Tanaev, V. S.) ★Декомпозиционные методы оптимизации проектных решений. (Russian) [Decomposition methods of optimization of planning decisions] **81b:90143**
Mingozzi, Aristide *See* **Christofides, Nicos; et al., 81d:90074**
Minieka, Edward The Chinese postman problem for mixed networks. **81a:90085**
Mitrani, I. *See* **Coffman, E. G., Jr., 81g:60090**
Nagao, Masashi Application of Markov chains to a stochastic reservoir theory for water supply. (Japanese. English summary) **81i:90067**
Nett, Edgar ★Deterministische Strategien zum Scheduling von Taskabhängigkeitsstrukturen für Mehrprozessorsysteme. (German) [Deterministic strategies for the scheduling of task-dependent structures for multiprocessor systems] **81f:68048**
Nishihara, Yoshiyuki *See* **Kaneko, Asao; et al., 81g:68029**
Pianca, P. (*with* Volpentesta, A.; Zecchin, M.) On the solution of a class of extremal problems with integer variables connected with the problem of optimal allocation at a service center. (Italian) **81i:90151**
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Plášil, Jan Problems of optimal organization of flows in a transportation network. (Czech summary) **81c:90041**
Rahimov, A. M. An approach to resource allocation in systems of network planning and control. (Russian) **81d:90020**
Reingold, Edward M. *See* **Supowit, Kenneth J.; et al.,** (*See* **81j:68006**)
Rinnooy Kan, A. H. G. *See* **Lenstra, J. K., 81a:68050** *and* **Interfaces between computer science and operations research, 81f:68001**
Romig, William *See* **Bodin, Lawrence D.; et al., 81a:90112**
Rowicki, Andrzej On optimal preemptive scheduling of independent tasks for multiprocessor systems. (Russian summary) **81i:68051a**
On the optimal preemptive scheduling for multiprocessor system. (Russian summary) **81i:68051b**
Rubal'skiĭ, G. B. Priority service of "long" calls in multichannel system. **81m:90054**
Schuster, Allan D. *See* **Bodin, Lawrence D.; et al., 81a:90112**
Sethi, Suresh P. *See* **Bookbinder, James H., 81a:90081**

Sevast'janov, S. V. On the problem of compact summation of vectors. (Russian) **(81i:90206)**
Sliwa, Edward *See* **Starzyk, Janusz, (81i:94045)**
Smol'janinova, Z. A. On the question of the stability of a correct algorithm. (Russian) **(81k:06009)**
Starzyk, Janusz (*with* Sliwa, Edward) Hierarchic decomposition method for the topological analysis of electronic networks. **(81i:94045)**
Supowit, Kenneth J. (*with* Plaisted, David A.; Reingold, Edward M.) Heuristics for weighted perfect matching. (*See* **81j:68006**)
Syslo, Maciej M. Optimal constructions of project networks (extended abstract). (*See* **81j:49001b**)
Talanov, V. A. (*with* Il'ičev, A. P.) Three-index transportation problems and compiling school timetables. (Russian) **(81e:90065)**
Tanaev, V. S. *See* **Levin, G. M., (81b:90143)**
Toth, Paolo *See* **Christofides, Nicos; et al., (81d:90074)** *and* **Carpaneto, Giorgio, (81i:90193)**
Towsley, Don Queuing network models with state-dependent routing. **(81g:68054)**
Tsuruoka, Kunitoshi *See* **Kaneko, Asao; et al., (81g:68029)**
Volpentesta, A. *See* **Pianca, P.; et al., (81i:90151)**
Węglarz, Jan Control in resource allocation systems. **(81j:90035)**
de Werra, Dominique Optimization in edge chromatic scheduling. **(81i:05070)**
On a class of hypergraphs occurring in chromatic scheduling. **(81f:05063)**
(Zakrevskiĭ, A. D.) *See* **Levin, G. M.; et al., (81b:90143)**
Zecchin, M. *See* **Pianca, P.; et al., (81i:90151)**
Amsterdam ★Interfaces between computer science and operations research. **(81f:68001)**
Computer science ★Interfaces between computer science and operations research. **(81f:68001)**
Interfaces between computer science and operations research ★Interfaces between computer science and operations research. **(81f:68001)**
Operations research ★Interfaces between computer science and operations research. **(81f:68001)**
Symposium:
Interfaces between Computer Science and Operations Research ★Interfaces between computer science and operations research. **(81f:68001)**

90B40 Search theory

Gittins, J. C. (*with* Roberts, D. M.) The search for an intelligent evader concealed in one of an arbitrary number of regions. **81b:90096**
Ibaraki, Toshihide Branch-and-bound procedure and state-space representation of combinatorial optimization problems. **81e:90053**
Kimeldorf, George (*with* Smith, Furman H.) Binomial searching for a random number of multinomially hidden objects. **81i:90117**
Mockus, J. The simple Bayesian algorithm for the multidimensional global optimization. **81h:90063**
Nakai, Tōru Optimal assignment for a random sequence with an unknown parameter. **81i:90118**
Pintér, János On the convergence and numerical effectiveness of random search procedures. (Hungarian. English summary) **81e:90054**
Rastrigin, L. A. Random search in the problems of identification. **81f:90059**
Roberts, D. M. *See* **Gittins, J. C., 81b:90096**
Shapiro, Roy D. Variable block search with prior information. **81a:90104**
Smith, Furman H. *See* **Kimeldorf, George, 81i:90117**
Tanaki, Mitsuhi Secretary problem with uncertain employment when backward solicitation is permitted. **81a:90172**
Ustjužaninov, V. G. Effectiveness of random search. **81m:90065**
Veličko, D. A. Random search for variants of solutions according to a vector criterion. (Russian) **81d:90066**
Washburn, A. R. On a search for a moving target. **81f:90060**

secondary classifications:

Ahlswede, Rudolf (*with* Wegener, Ingo) ★Suchprobleme. (German) [Search problems] **(81d:94022)**
Groppen, V. O. Enhancement of operating speed of randomized algorithms for combinatorial problems with Boolean variables. **(81b:68035)**
Page, E. S. (*with* Wilson, L. B.) ★An introduction to computational combinatorics. **(81d:68001)**
Palkovskiĭ, G. S. Minimax programs of diagnosis of the state of complex systems. **(81i:90092)**
Phelps, R. I. (*with* Thomas, L. C.) On optimal performance in self-organizing paging algorithms. **(81g:68044)**
Puri, Narindra Nath *See* **Sannuti, Peddapullaiah, (81j:94052)**
Rastrigin, L. A. (*with* Ripa, K. K.) Synthesis of factorial designs of experiments by the adaptive random search method. (Russian) **(81g:62134)**
Ripa, K. K. *See* **Rastrigin, L. A., (81g:62134)**
Sannuti, Peddapullaiah (*with* Puri, Narindra Nath) Symbolic network analysis—an algebraic formulation. **(81j:94052)**
Smith, T. H. C. A LIFO implicit enumeration algorithm for the asymmetric travelling salesman problem using a one-arborescence relaxation. **(81c:90044)**
Švecov, V. I. Optimal ordering of indexing of fields in a file. (Russian) **(81b:68120)**
Tarasenko, G. S. Determination of a parametric and structural adaptation in random search algorithms. (Russian) **(81g:65087)**
Thomas, L. C. *See* **Phelps, R. I., (81g:68044)**
Tošić, Ratko An optimal search procedure. (Serbo-Croatian summary) **(81e:68119)**
Vengerov, A. B. The use of logical models for conducting data bases for problems of optimal planning and control. (Russian) **(81b:68023)**
Wegener, Ingo *See* **Ahlswede, Rudolf, (81d:94022)**
Wilson, L. B. *See* **Page, E. S., (81d:68001)**
Žďanok, A. I. Pseudogradiency of algorithms of random search with continuous tactics. (Russian) **(81c:65029)**

90B50 Decision theory, including multiple objectives [See also 90A05, 90C31, 90D35.]

90B99 None of the above, but in this section

Abonyi, George (*with* Howard, Nigel) A Boolean approach to interactive program planning. **81i:90119**
Bianco, L. (*with* Cini, M.; Grippo, L.) A strategic approach to air traffic control. (*See* **81j:49001b**)
Cini, M. *See* **Bianco, L.; et al., (*See* 81j:49001b)**
Cypkin, Ja. Z. *See* **Poljak, B. T., (*See* 80d:93010a)**
Diamond, Harvey Further results on coal mine valuation functions. **81m:90066**
Grippo, L. *See* **Bianco, L.; et al., (*See* 81j:49001b)**
Hoffman, Lance J. *See* **Neitzel, Lee A., 81i:90120**
Howard, Nigel *See* **Abonyi, George, 81i:90119**
Laurini, Robert Introduction au multipilotage urbain. (English summary) **81c:90050**
Leiserson, Charles E. Area-efficient graph layouts (for VLSI). (*See* **81i:68008**)
Neitzel, Lee A. (*with* Hoffman, Lance J.) Fuzzy cost/benefit analysis. **81i:90120**
Nowicki, Eugeniusz (*with* Popkiewicz, Maciej) A method for planning continuous experiments with regard to cost. (Polish. English and Russian summaries) **81a:90105**
Poljak, B. T. (*with* Cypkin, Ja. Z.) Robust identification. (*See* **80d:93010a**)
Popkiewicz, Maciej *See* **Nowicki, Eugeniusz, 81a:90105**
Razmadze, S. A. Optimization of the longitudinal profile of a subway tunnel layout with account taken of special constraints. (Russian. Georgian and English summaries) **81h:90084**
Schultz, George W. (*with* Tsokos, Chris P.) Stochastic combat modeling—Lanchester's first law. **81i:90121**
Sethi, Suresh P. Optimal pilfering policies for dynamic continuous thieves. **81b:90097**
Erratum to: "Optimal pilfering policies for dynamic continuous thieves" [Management Sci. 25 (1979/80), no. 6, 535–542; MR 81b:90097]. **81j:90074**
Swetits, J. Asymptotic estimation of actuarial functions arising in coal mine valuation. **81m:90067**
Tsokos, Chris P. *See* **Schultz, George W., 81i:90121**
(Varaiya, Pravin) *See* **Laurini, Robert, 81c:90050**

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Atkinson, Anthony A. Standard setting in an agency. **(81h:90006)**
Bellomo, Nicola Mathematical modeling of the evolution equation of the dynamics of a large class of stochastic systems with kinetic interaction. **(81m:82001)**
Bock, H. H. Mathematisch-statistische Modelle in der Clusteranalyse. **(81i:62102)**
Čuba, Jaroslav Systematic forming of complex variants—assumption for optimization and decision making. (Czech. English summary) **(81h:90004)**
Casalino, G. (*with* Davoli, F.; Zoppoli, R.) Optimal control of information structures. **(81j:90151)**
Czechowicz, Kazimierz (*with* Malave, Nelson) A complex of operations approach to the optimal control of the set of plants. **(81d:93005)**
Davoli, F. *See* **Casalino, G.; et al., (81j:90151)**
Gehrlein, William V. "Problem specialization" in mechanical decision processes. (French summary) **(81k:90002)**
Gunther, G. (*with* Hartnell, B. L.) On minimizing the effects of betrayals in a resistance movement. **(81i:05091)**
Hartnell, B. L. *See* **Gunther, G., (81i:05091)**
Krasnoščekov, P. S. Mathematics and design. (Russian) **(81k:00012)**
Krawczak, Maciej Design of regular hierarchical organizational structures. (Polish. Russian and English summaries) **(81m:93009)**
Malave, Nelson *See* **Czechowicz, Kazimierz, (81d:93005)**
Mazurov, Vl. D. Method of committees and applications in operations research. (German and Russian summaries) **(81g:90090)**
Nguyen, Hung Trung Conditioning in possibility theory. **(81d:93009)**
Zimmermann, H.-J. Theory and applications of fuzzy sets. (French summary) (*See* **80a:90003**)
Zoppoli, R. *See* **Casalino, G.; et al., (81j:90151)**

90Cxx Mathematical programming {For papers emphasizing calculus of variations or involving abstract spaces, see 49Dxx. For numerical methods, see 65K05.}

(Padberg, Manfred W.) *See* **Combinatorial optimization, 81c:90051**
Shapiro, Jeremy F. ★Mathematical programming: structures and algorithms. **81b:90098**
Combinatorial optimization ★Combinatorial optimization. **81c:90051**
Optimization ★Combinatorial optimization. **81c:90051**

secondary classifications:

Dubuc, Serge ★Problèmes d'optimisation en calcul des probabilités. (French) [Optimization problems in the theory of probabilities] **(81a:60002)**
Kabe, D. G. On some coverage probability maximization problems. **(81c:62039)**
Kai, Yû *See* **Kanō, Seigo, (81a:92022)**
Kallauer, A. A computational method for hierarchical optimization of complex systems. **(81a:93008)**
Kanō, Seigo (*with* Kai, Yû) Optimal reinforcements of generalized learning processes. **(81a:92022)**
Kuznecov, Ju. N. (*with* Kuzubov, V. I.; Vološčenko, A. B.) ★Математическое программирование. (Russian) [Mathematical programming] **(81i:90002)**
Kuzubov, V. I. *See* **Kuznecov, Ju. N.; et al., (81i:90002)**
Vološčenko, A. B. *See* **Kuznecov, Ju. N.; et al., (81i:90002)**

90C05 Linear programming

Adil'dev, A. I. The method of normal solutions in linear programming. (*See* **81l:68009**)

Aliev, A. A. Reduction of the number of unknowns in the process of solving linear programming problems. (Russian) **81b:90099**

Arthur, Jeffrey L. (*with* Ravindran, A.) PAGP, a partitioning algorithm for (linear) goal programming problems. **81l:90122**

Asgrall, Bengt (*with* Stone, Richard E.) Khachiyan's linear programming algorithm. **81l:90123**

Berkovics, Carlos M. Optimal linear programming modeling given well-known circumstances and a finite capability of perturbation. **81j:90075**

(Branson, Thomas P.) *See* **Solodovnikov, A. S., 81d:90071**

Bulenkov, V. A. (*with* Lotov, A. V.) Algorithms for analysis of the independence of inequalities in a linear system. (Russian) **81f:90061**

Charnes, A. (*with* Gribik, P. R.; Kortanek, Kenneth O.) Separably-infinite programs. (German summary) **81a:90106**

Charnetski, Johnnie R. Linear programming with partial information. **81j:90076**

Cheng, M. C. New criteria for the simplex algorithm. **81l:90124**

Croitoru, Cornelius On approximate algorithms for combinatorial linear maximization problems. (German summary) **81k:90055**

Delsarte, Philippe A refined version of Khachian's algorithm. **81k:90056**

Dobkin, David P. (*with* Reiss, Steven P.) The complexity of linear programming. **81e:90055**

Dubois, Didier (*with* Prade, Henri M.) Systems of linear fuzzy constraints. **81l:90125**

Eremin, I. I. (*with* Mazurov, Vl. D.) Automatic control of the parameters of an iterative process for use in mathematical programming. **81j:90077**

Gabasov, R. F. (*with* Kirillova, F. M.) ★Методы линейного программирования. Часть 2. Транспортные задачи. (Russian) [Linear programming methods. Part 2. Transportation problems] **81b:90100**

(*with* Kirillova, F. M.; Kostjukova, O. I.) A two-stage method for solving a general linear programming problem. (Russian. English summary) **81j:90078**

(*with* Kirillova, F. M.; Kostjukova, O. I.) Approximate methods for solving the general linear programming problem. (Russian. English summary) **81k:90057**

Gaicgori, V. G. Successive aggregation as a means of solving ill-posed problems of linear programming. (Russian) **81h:90085**

Glannessi, F. Continued fractions and explicit solutions of a particular discrete optimization problem. **81h:90086**

Gilsinn, J. (*with* Hoffman, K.; Jackson, Richard H. F.; Leyendecker, E.; Saunders, P.; Shier, D. R.) Methodology and analysis for comparing discrete linear L_1 approximation codes. (*See* **81h:62127**)

(Glasser, Lawrence M.) *See* **Solodovnikov, A. S., 81d:90071**

Glover, Fred (*with* Klingman, Darwin) A $o(n \log n)$ algorithm for LP knapsacks with GUB constraints. **81b:90101**

Goldfarb, Donald (*with* Sit, William Y.) Worst case behavior of the steepest edge simplex method. **81d:90067**

Gribik, P. R. *See* **Charnes, A.; et al., 81a:90106**

Hačijan, L. G. Polynomial algorithms in linear programming. (Russian) **81j:90079**

Helgason, R. V. (*with* Kennington, J. L.) Spike swapping in basis reinversion. **81m:90068**

Hillestad, Richard J. (*with* Jacobsen, Stephen E.) Linear programs with an additional reverse convex constraint. **81f:90062**

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Karade, T. M. (*with* Kumbhare, P. G.) Alternative approach to the simplex method. **81e:90056**

Karčicka, Dimitra L. On a dual pair of LP-problems. (Macedonian summary) **81d:90068**

Karwan, Mark H. (*with* Rardin, Ronald L.) Some relationships between Lagrangian and surrogate duality in integer programming. **81d:90069**

Kennington, J. L. *See* **Helgason, R. V., 81m:90068**

Kersten, Grzegorz (*with* Michałowski, Wojciech; Nykowski, Ireneusz) On a certain sensitivity analysis in linear programming problems. I. (Polish. English and Russian summaries) **81b:90102**

Kirillova, F. M. *See* **Gabasov, R. F., 81b:90100; Gabasov, R. F.; et al., 81j:90078** *and* **Gabasov, R. F.; et al., 81k:90057**

Klempous, Ryszard (*with* Sikorski, Miron) Algorithms for Weber's problem with set-inclusive constraints. **81k:90058**

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Kononenko, A. M. (*with* Truhanovskiĭ, N. N.) A class of transport polytopes with maximal number of vertices. (Russian. English summary) **81e:90057**

Kortanek, Kenneth O. *See* **Charnes, A.; et al., 81a:90106**

Kostjukova, O. I. *See* **Gabasov, R. F.; et al., 81j:90078** *and* **Gabasov, R. F.; et al., 81k:90057**

Kozel, P. T. Degenerate problems of linear programming. (Russian) **81h:90087**

Krabs, W. One-sided L_1-approximation as a problem of semi-infinite linear programming. **81b:90103**

Kumbhare, P. G. *See* **Karade, T. M., 81e:90056**

Lasserre, J. B. (*with* Roubellat, F.) Une méthode rapide de résolution de certains programmes linéaires à structure en escalier. (English summary) **81e:90058**

Leyendecker, E. *See* **Gilsinn, J.; et al., (*See* 81h:62127)**

Lobyrev, A. I. A scheme of precision regulation in projection methods for mathematical programming problems. (Russian) **81h:90088**

Projection method for solving special problems of linear programming. (Russian) **81k:90059**

Lotov, A. V. *See* **Bulenkov, V. A., 81f:90061**

Matheiss, T. H. (*with* Rubin, David S.) A survey and comparison of methods for finding all vertices of convex polyhedral sets. **81e:90059**

Mazurov, Vl. D. *See* **Eremin, I. I., 81j:90077**

Michałowski, Wojciech *See* **Kersten, Grzegorz; et al., 81b:90102**

Mihalevsko, V. M. An effective computational procedure for the degeneration of dual problems of mathematical programming. (Russian) **81f:90063**

Nykowski, Ireneusz *See* **Kersten, Grzegorz; et al., 81b:90102**

O'Leary, Dianne P. Linear programming problems arising from partial differential equations. **81g:90060**

Orden, Alex A study of pivot probabilities in LP tableaus. **81m:90069**

A step toward probabilistic analysis of simplex method convergence. **81e:90060**

Pinsker, A. G. The general linear programming problem in ordered spaces and some of its applications. (Russian) **81l:90126**

A general problem of linear programming in ordered spaces. (Russian) **81b:90104**

Poltavcev, A. A. Choice of the approximate solution of a linear programming problem with inexact initial data. (Russian) **81m:90070**

Prade, Henri M. *See* **Dubois, Didier, 81l:90125**

Rardin, Ronald L. *See* **Karwan, Mark H., 81d:90069**

Ravindran, A. *See* **Arthur, Jeffrey L., 81l:90122**

Reiss, Steven P. *See* **Dobkin, David P., 81e:90055**

Roličin, V. O. An approach to the solution of partially integral problems of linear programming. (Russian) **81b:90105**

Rothenberg, Ronald I. ★Linear programming. **81h:90089**

Roubellat, F. *See* **Lasserre, J. B., 81e:90058**

Rubin, David S. *See* **Matheiss, T. H., 81e:90059**

Sannomiya, Nobuo A method for solving mixed-integer linear programming problems with angular structure. **81a:90107**

Šapot, D. V. (*with* Ševčuk, L. M.) The use of the convolution method in two-stage linear programming problems. (Russian) **81e:90061**

Saunders, P. *See* **Gilsinn, J.; et al., (*See* 81h:62127)**

Ševčuk, L. M. *See* **Šapot, D. V., 81e:90061**

Sherali, Hanif D. (*with* Shetty, C. M.) A finitely convergent algorithm for bilinear programming problems using polar cuts and disjunctive face cuts. **81e:90062**

Shetty, C. M. *See* **Sherali, Hanif D., 81e:90062**

Shier, D. R. *See* **Gilsinn, J.; et al., (*See* 81h:62127)**

Sideri, Enrico The convergence of algorithms for functional linear programming. (Italian. English summary) **81d:90070**

Sikorski, Miron *See* **Klempous, Ryszard, 81k:90058**

Sit, William Y. *See* **Goldfarb, Donald, 81d:90067**

Šiljar, P. È. Solution of large scale linear programming problems using aggregation. (Russian) **81a:90108**

Solodovnikov, A. S. ★Systems of linear inequalities. **81d:90071**

Späth, Helmuth Klassenweise diskrete Approximation. (English summary) **81c:90052**

Stone, Richard E. *See* **Asgrall, Bengt, 81l:90123**

Teschke, L. *See* **Thron, R., 81a:90109**

Thron, R. (*with* Teschke, L.) Eine Verallgemeinerung der Theorie der linearen Optimierung. (English and Russian summaries) **81a:90109**

Truhanovskiĭ, N. N. *See* **Kononenko, A. M., 81e:90057**

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Witzgall, Christoph On one-row linear programs. **81e:90063**

Wolfe, Philip Some references for the ellipsoid algorithm. **81l:90127**

The "ellipsoid algorithm". **81a:90110**

Zimmermann, Uwe Duality for algebraic linear programming. **81k:90060**

Zimonjić, Svetozar The gradient basis of the simplex method. II. (Serbo-Croatian. English summary) **81b:90106**

Zionts, Stanley (*with* Wallenius, J.) On finding the subset of efficient vectors of an arbitrary set of vectors. **81k:90061**

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Bounds for row-aggregation in linear programming. **81l:90128**

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Armstrong, Ronald D. (*with* Frome, Edward) A special purpose linear programming algorithm for obtaining least absolute value estimators in a linear model with dummy variables. (*See* **81h:62127**)

(*with* Kung, David S.) A dual method for discrete Chebychev curve fitting. **(81j:65031)**

(*with* Sklar, Michael G.) A linear programming algorithm for curve fitting in the L_∞ norm. **(81j:65032)**

Barrodale, I. (*with* Roberts, F. D. K.) Algorithms for restricted least absolute value estimation. (*See* **81h:62127**)

Beck, Robert E. *See* **Kolman, Bernard, (81g:90002)**

Burkard, Rainer E. Über eine Anwendung algebraischer Transportprobleme bei Reihenfolgeproblemen. (English summary) **(81c:90048)**

Chandrasekaran, R. (*with* Kumar, Santosh; Wagner, D.) Critical path problem under assignment constraint—an application of an extreme point mathematical programming problem. **(81l:90070)**

Dahlquist, Germund (*with* Golub, Gene H.; Nash, Stephen G.) Bounds for the error in linear systems. **(81b:65028)**

De Vylder, Florian An illustration of the duality technique in semicontinuous linear programming. **(81e:90096)**

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Fiakel'štein, Ju. Ju. A polynomial ε-optimization algorithm in the multidimensional knapsack problem. (Russian) **(81k:65071)**

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Haessler, Robert W. A note on computational modifications to the Gilmore-Gomory cutting stock algorithm. **(81h:90137)**

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Huard, P. La méthode de Frank et Wolfe "à petits pas". (English summary) **(81h:90126)**
Ivanov, V. V. (*with* Ljudvičenko, V. A.; Mihalēvič, V. S.; Trubin, V. A.; Šor, N. Z.) Questions of increasing the effectiveness of algorithms for minimization of functions and mathematical programming. (Russian) **(81i:90147)**
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Kaplan, A. A. On the analysis of certain estimates of the rate of convergence in the penalty method. (Russian) **(81e:90092)**
Kaul, R. N. (*with* Gupta, Bina) Efficiency and linear vector maximum value problem. **(81f:90102)**
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Klatte, Diethard Über lokale Stabilitätsmengen in der parametrischen quadratischen Optimierung. (English and Russian summaries) **(81f:90103)**
Kolman, Bernard (*with* Beck, Robert E.) ★Elementary linear programming with applications. **(81g:90002)**
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Sherali, Hanif D. (*with* Shetty, C. M.) On the generation of deep disjunctive cutting planes. **(81k:90082)**
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Šor, N. Z. *See* **Ivanov, V. V.; et al., (81i:90147)**
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Wellington, John F. *See* **Narula, Subhash C., (*See* 81h:62127)**

90C06 Large scale linear programming

Brown, Gerald G. (*with* Thomen, David S.) Automatic identification of generalized upper bounds in large-scale optimization models. **81k:90062**
Čebotarev, S. P. On the use of matrix factorization techniques in penalty function method for dynamic linear programs. **81h:90090**
Dantzig, George B. *See* **Perold, André F., 81h:90091**
Huard, P. Résolution de programmes linéaires de grande taille. **81i:90129a**
La méthode simplex sans inverse explicite. **81i:90129b**
Perold, André F. (*with* Dantzig, George B.) A basis factorization method for block triangular linear programs. **81h:90091**
A degeneracy exploiting LU factorization for the simplex method. **81i:90130**
Pinsker, A. G. A linear programming problem with variable coefficients in the objective function. (Russian) **81b:90107**
Shapiro, Jeremy F. Nondifferentiable optimization and large scale linear programming. **81i:90131**
Thomen, David S. *See* **Brown, Gerald G., 81k:90062**

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Bazaraa, Mokhtar S. (*with* Goode, Jamie J.; Rardin, Ronald L.) An algorithm for finding the shortest element of a polyhedral set with application to Lagrangian duality. **(81e:90083)**
Bragard, L. (*with* Vangeldère, J.) Adjonction ou suppression d'objectifs en programmation à objectifs linéaires multiples. **(81i:90180)**
Drud, A. Application of sparse matrix techniques in large scale nonlinear programming. **(81i:90175)**
Goode, Jamie J. *See* **Bazaraa, Mokhtar S.; et al., (81e:90083)**
Rardin, Ronald L. *See* **Bazaraa, Mokhtag S.; et al., (81e:90083)**
Vangeldère, J. *See* **Bragard, L., (81i:90180)**

90C08 Special problems of linear programming (transportation and multi-index problems, etc.)

Bakhshi, H. C. (*with* Puri, M. C.) An efficient technique for extreme point mathematical programming problems. **81c:90053**
Bansal, Sushma (*with* Puri, M. C.) A min max problem. (German summary) **81h:90092**
Bitran, Gabriel R. Linear multiple objective problems with interval coefficients. **81m:90071**
Bodin, Lawrence D. (*with* Golden, Bruce L.; Schuster, Allan D.; Romig, William) A model for the blocking of trains. **81a:90112**
Bulavskiĭ, V. A. (*with* Zvjagina, R. A.) Transformation of the multiplicative form of a matrix with hierarchical block structure. (Russian) **81c:90054**
Burkard, Rainer E. (*with* Zimmermann, Uwe) Weakly admissible transformations for solving algebraic assignment and transportation problems. **81h:90093**
Čarin, V. S. *See* **Protasov, I. V.; et al., 81d:90072**
Dauer, Jerald P. (*with* Krueger, Robert J.) A multiobjective optimization model for water resources planning. **81g:90061**
Derigs, U. Methoden zur Lösung des Bottleneck-Transportproblems. (English summary) **81i:90132**
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Grötschel, Martin (*with* Padberg, Manfred W.) On the symmetric travelling salesman problem. I. Inequalities. **81m:90072a**
(*with* Padberg, Manfred W.) On the symmetric travelling salesman problem. II. Lifting theorems and facets. **81m:90072b**
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Jörnsten, Kurt O. An algorithm for the combined distribution and assignment problem. **81m:90073**
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Kortanek, Kenneth O. (*with* Yamasaki, Maretsugu) Equalities in transportation problems and characterizations of optimal solutions. **81m:90074**
Kovalev, M. M. (*with* Dron′, S. P.) Piecewise-linear optimization on unconnected domains. (Russian) **81f:90064**
Krueger, Robert J. *See* **Dauer, Jerald P., 81g:90061**
Masch, Victor V. The cyclic method of solving the transshipment problem with an additional linear constraint. **81a:90114**
Padberg, Manfred W. *See* **Grötschel, Martin, 81m:90072a** *and* **Grötschel, Martin, 81m:90072b**
Panayiotopoulos, J.-C. Catastrophe transportation programming. **81h:90094**
Protasov, I. V. (*with* Tretjak, V. P.; Čarin, V. S.) On the covering problem. (Russian. English summary) **81d:90072**
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Rosenblum, Daniel M. *See* **Wendell, Richard E., 81i:90135**
Rudolph, H. Zur Approximation infiniter linearer Optimalprobleme. **81i:90133**
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Scobey, P. (*with* Kabe, D. G.) Direct solutions to some linear and quadratic programming problems. **81e:90064**
Talanov, V. A. (*with* Il′ičev, A. P.) Three-index transportation problems and compiling school timetables. (Russian) **81e:90065**
Tretjak, V. P. *See* **Protasov, I. V.; et al., 81d:90072**
Vlach, Milan Conditions for the existence of a solution to the multi-index transportation problems. **81i:90134**
Wendell, Richard E. (*with* Rosenblum, Daniel M.) Further results on the minimization of a nonseparable objective function subject to disjoint constraints. **81i:90135**
White, D. J. Multi-objective interactive programming. **81g:90062**
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Zimmermann, Uwe *See* **Burkard, Rainer E., 81h:90093**
Zvjagina, R. A. *See* **Bulavskiĭ, V. A., 81c:90054**

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Ahrens, J. H. (*with* Finke, G.) Primal transportation and transshipment algorithms. (German summary) **(81a:90079)**
Aneja, Y. P. (*with* Nair, K. P. K.) Two problems in multicommodity networks. (French summary) **(81c:90036)**
Armstrong, Ronald D. (*with* Elam, Joyce J.; Hultz, John W.) Obtaining least absolute value estimates for a two-way classification model. (*See* **81h:62127)**
Duca, Dorel I. On vectorial programming problem in complex space. (Romanian summary) **(81f:90100)**
Duca, Eugenia On the ordering of the efficient extremal points in a vector programming problem. (Romanian. English summary) **(81d:90096)**
Elam, Joyce J. *See* **Armstrong, Ronald D.; et al., (*See* 81h:62127)**
Filonenko, N. V. Approximate solution of parametric integer programming problems. **(81f:90070)**
Finke, G. *See* **Ahrens, J. H., (81a:90079)**
Grabowski, Józef An algorithm for the solution of the traveling salesman problem via disjunctive graphs. (Polish) **(81j:05062)**
Gupta, Reeta Solving generalized transportation problem with constraints. **(81j:90113)**
Hadlock, Frank (*with* Yuan, L.) Generating route systems for automated guideway transit networks. **(81g:90058)**
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Miller, Louis W. Using linear programming to derive planning horizons for a production smoothing problem. **(81e:90048)**
Morris, James G. (*with* Verdini, William A.) Minisum l_p distance location problems solved via a perturbed problem and Weiszfeld's algorithm. **(81b:90064)**
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Peterson, Bruce E. A cut-flow procedure for transportation network optimization. **(81a:90086)**
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Saxena, P. C. (*with* Aggarwal, S. P.) Parametric linear fractional functional programming. **(81f:90107)**
Seshan, C. R. (*with* Tikekar, V. G.) On Sharma-Swarup algorithm for time minimising transportation problems. **(81h:90081)**
Shepherd, J. G. Cautious nonlinear optimisation: a new technique for allocation problems. **(81j:90038)**
Švartin, S. M. A study of the stability of transportation problems. (Russian) **(81h:90074)**

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Wüstefeld, Axel (*with* Zimmermann, Uwe) Nonlinear one-parametric linear programming and t-norm transportation problems. **(81f:90106)**
Xie, Li Tong Programming problems on n-complexes. **(81k:90100)**
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Zipkin, Paul H. Bounds for row-aggregation in linear programming. **(81i:90128)**

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Balas, Egon (*with* Zemel, Eitan) An algorithm for large zero-one knapsack problems. **81i:90136**
Beresnev, V. L. (*with* Gimadi, È. H.; Dement'ev, V. T.) ★Экстремальные задачи стандартизации. (Russian) [Extremal standardization problems] **81f:90065**
Dement'ev, V. T. *See* **Beresnev, V. L.; et al., 81f:90065**
Fayard, D. (*with* Plateau, G.) Un problème du knapsack non linéaire en variables 0-1. **81h:90095**
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Karelin, V. P. (*with* Kovalev, S. M.) A problem of the packing of several knapsacks. (Russian) **81i:90138**
Korte, Bernhard (*with* Monma, Clyde L.) Some remarks on a classification of oracle-type algorithms. **81i:90139**
Kovalev, S. M. *See* **Karelin, V. P., 81i:90138**
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Nemhauser, George L. (*with* Weber, Glenn M.) Optimal set partitioning, matchings and Lagrangian duality. **81g:90063**
Plateau, G. *See* **Fayard, D., 81h:90095**
Weber, Glenn M. *See* **Nemhauser, George L., 81g:90063**
Zemel, Eitan *See* **Balas, Egon, 81i:90136**

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Abonyi, George (*with* Howard, Nigel) A Boolean approach to interactive program planning. **(81i:90119)**
Beale, E. M. L. Fractional programming with zero-one variables. **(81e:90099)**
Căzănescu, Virgil Emil (*with* Rudeanu, Sergiu) Independent sets and kernels in graphs and hypergraphs. **(81k:05078)**
Gallo, Giorgio (*with* Hammer, Peter L.; Simeone, Bruno) Quadratic knapsack problems. **(81g:90065)**
Grötschel, Martin On the monotone symmetric travelling salesman problem: hypo-Hamiltonian/hypotraceable graphs and facets. **(81h:05095)**
Hammer, Peter L. *See* **Gallo, Giorgio; et al., (81g:90065)**
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Nigmatullin, R. G. Matching maximality recognition in $O(m+n)$-operations. (Russian. German and English summaries) **(81m:05111)**
Paul, H. (*with* Law, S. S.; Leong, H. K.) A method for single facility multiple products scheduling. **(81i:90093)**
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Yannakakis, Mihalis On a class of totally unimodular matrices. **(81k:90036)**

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Albano, A. M. (*with* Orsini, R.) A tree search approach to the M-partition and knapsack problems. **81i:90140**
Alliney, Stefano (*with* Barnabei, Marilena; Pezzoli, Luigi) W-optimal assignable sets and allocation problems. (Italian summary) **81c:90055**
Armstrong, Ronald D. (*with* Cook, W. D.; Palacios-Gomez, F. E.) An algorithm for a nonlinear discontinuous knapsack problem. **81d:90073**
Arthur, Jeffrey L. (*with* Ravindran, A.) A branch and bound algorithm with constraint partitioning for integer goal programming problems. **81f:90066**
Babat, L. G. Growth of coefficients in linear integer programming. (Russian) **81f:90067**
Bachem, Achim (*with* Kannan, Ravindran) Applications of polynomial Smith normal form calculations. **81i:90141**
(*with* von Randow, Rabe) Integer theorems of Farkas lemma type. **81e:90066**
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(*with* Martin, Clarence H.) Pivot and complement-a heuristic for 0-1 programming. **81f:90068**
Bam-Zelikovič, T. G. An algorithm for solution of systems of inequalities of block form with constraining linear inequalities. (Russian) **81f:90069**
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Barnabei, Marilena *See* **Alliney, Stefano; et al., 81c:90055**
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Bell, David E. The group approach to integer programming: an outline of recent progress. **81k:90063**
Bertolazzi, P. (*with* Leporelli, C.; Lucertini, M.) Alternative group relaxation of integer programming problems. **81m:90076**
Bikov, V. M. (*with* Sergiĕnko, I. V.) A method of solving problems of discrete programming approximately. (Russian. English summary) **81b:90168**
Čal'kov, V. D. Approximate algorithm for solving the traveling salesman problem with grouped points. (Bulgarian. Russian and English summaries) **81i:90143**
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Filonenko, N. V. Approximate solution of parametric integer programming problems. **81f:90070**
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Greenberg, Harold (*with* Feldman, Israel) A better step-off algorithm for the knapsack problem. **81i:90146**
Grötschel, Martin On the symmetric travelling salesman problem: solution of a 120-city problem. **81j:90081**
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Ivanov, V. V. (*with* Ljudvičenko, V. A.; Mihalevič, V. S.; Trubin, V. A.; Šor, N. Z.) Questions of increasing the effectiveness of algorithms for minimization of functions and mathematical programming. (Russian) **81i:90147**
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Johnson, Ellis L. (*with* Suhl, Uwe H.) Experiments in integer programming. **81f:90071**
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Kovalev, M. M. (*with* Do Zuĭ Čin') Analysis of a gradient algorithm for maximization of a discretely concave function. (Russian. English summary) **81f:90072**
Lawler, Eugene L. Fast approximation algorithms for knapsack problems. (*See* **81f:68001**)
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Swarup, Kanti *See* **Gupta, S. N., 81k:90073**
Szuba, Adam Stochastic method of searching for a global minimum. (Polish. Russian and English summaries) **81m:90087**
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Theodorescu, Radu The minimax principle and random programs. **81c:90064**
Timmer, G. T. *See* **Boender, C. G. E.; et al., 81k:90107**
Tobias, T. Approximation method for the solution of programming problems with operator constraints. **81h:90113**
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Ünlü, Fevzi Unconstrained probabilistic goal programming by the least square adjustment to finite convolution. (*See* **81j:93006b**)
Wollmer, Richard D. Two-stage linear programming under uncertainty with 0-1 integer first stage variables. **81i:90161**
Investment in stochastic minimum cost generalized multicommodity networks with application to coal transport. **81k:90078**
Zavriev, S. K. On finding stationary points in the problem of searching for a maximin with constraints. (Russian) **81e:90075**
Conference:
Stochastic Programming ★Stochastic programming. **81j:90094**
Oxford ★Stochastic programming. **81j:90094**
Stochastic programming ★Stochastic programming. **81j:90094**

secondary classifications:

Bowerman, Bruce L. (*with* Koehler, Anne B.) An optimal policy for sampling from uncertain distributions. **(81i:62145)**
Deák, István Monte Carlo methods for computing probabilities of sets in higher-dimensional spaces in case of normal distribution. (Hungarian. English summary) **(81c:65008)**
Computation of multiple normal probabilities. **(81j:65016)**
Eremin, I. I. (*with* Mazurov, Vl. D.) Synthesis of nonstationary processes of mathematical programming, containing pattern recognition. **(81j:68107)**
Fedorov, V. V. Stochastic decomposition in extremal problems. (Russian) **(81h:65068)**
García-Carrasco Aponte, M.ª Pilar Some cases of optimal allocation of observations. (Spanish. English summary) **(81k:62013)**
Herkenrath, Ulrich (*with* Theodorescu, Radu) On a stochastic approximation procedure applied to the bandit problem. (German, Russian and French summaries) **(81d:62088)**
Ilieşcu, Dan V. (*with* Vodă, Viorel Gh.) Some notes on Pareto distribution. **(81g:62050)**
(Kall, Peter) *See* **Recent results in stochastic programming, (81i:90008)**
Kaniovskiĭ, Ju. M. (*with* Knopov, P. S.) Asymptotic properties of some stochastic approximation methods. **(81i:62149)**
Kelle, Péter Chance constrained inventory model for an asphalt mixing problem. **(81j:90042)**
Knopov, P. S. *See* **Kaniovskiĭ, Ju. M., (81i:62149)**
Koehler, Anne B. *See* **Bowerman, Bruce L., (81i:62145)**
(Kolesaja, V. A.) *See* **Stochastic optimization models, (81e:90004)**
Lane, M. N. (*with* Littlechild, S. C.) A stochastic programming approach to weather-dependent pricing for water resources. (*See* **81j:90094**)
Lipscomb, Joseph (*with* Zalkind, David) Deterministic models for production of services with stochastic technology. **(81f:90025)**
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Mayer, János A nonlinear programming method for the solution of a stochastic programming model of A. Prékopa. **(81k:90068)**
Mazurov, Vl. D. *See* **Eremin, I. I., (81j:68107)**
Mirzoahmedov, F. (*with* Timošenko, T. G.) An approach to the solution of the problem of control of the operation of a single reservoir. (Russian) **(81d:90035)**
Mockus, J. The simple Bayesian algorithm for the multidimensional global optimization. **(81h:90083)**
Nekrylova, Z. V. Asymptotic behavior of the stochastic quasigradient method. (Russian. English summary) **(81i:62152)**
Orden, Alex A study of pivot probabilities in LP tableaus. **(81m:90069)**
Orlovskiĭ, S. A. On formalization of a general fuzzy mathematical problem. **(81d:90004)**
Pazdur, Anna *See* **Pazdur, Mieczysław, (81g:65020)**
Pazdur, Mieczysław (*with* Pazdur, Anna) Application of the nonlinear least squares method to the estimation of the parameters of a function for approximation of the results of measurements. (Polish. Russian and English summaries) **(81g:65020)**
Pintér, János On the convergence and numerical effectiveness of random search procedures. (Hungarian. English summary) **(81e:90054)**
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Pritsker, A. Alan B. *See* **Sigal, C. Elliott; et al., (81a:90150)**
Ruszczyński, Andrzej Feasible direction methods for stochastic programming problems. **(81m:65101)**
Schagen, I. P. The use of stochastic processes in interpolation and approximation. **(81a:65015)**
Schmetterer, Leopold From stochastic approximation to the stochastic theory of optimization. **(81m:62156)**
Sengupta, Jati K. Complementarity theorems in stochastic programming. **(81d:90103)**
Sigal, C. Elliott (*with* Pritsker, A. Alan B.; Solberg, James J.) The use of cutsets in Monte Carlo analysis of stochastic networks. **(81a:90150)**
Solberg, James J. *See* **Sigal, C. Elliott; et al., (81a:90150)**
Tanaka, Yutaka Optimal scaling for arbitrarily ordered categories. **(81d:62059)**
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Theodorescu, Radu *See* **Herkenrath, Ulrich, (81d:62088)**
Thibault, Lionel Espérances conditionnnelles d'intégrandes lipschitziens et d'intégrandes semi-continus inférieurement. (English summary) **(81m:60004)**
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Oberwolfach ★Recent results in stochastic programming. **(81i:90008)**
Recent results in stochastic programming ★Recent results in stochastic programming. **(81i:90008)**
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Stochastic programming ★Recent results in stochastic programming. **(81i:90008)**

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Abaffy, József One class of dual matrix methods. **81f:90076**
Bartholomew-Biggs, M. C. On the convergence of some constrained minimization algorithms based on recursive quadratic programming. **81e:90076**
Bernau, H. Upper bound techniques for quadratic programming. **81h:90114**
Betts, J. T. A compact algorithm for computing the stationary point of a quadratic function subject to linear constraints. **81i:90162**
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Chandra, Suresh *See* **Gulati, T. R., 81a:90123**
Chang, Yow Yieh (*with* Cottle, Richard W.) Least-index resolution of degeneracy in quadratic programming. **81f:90077**
Clark, David I. An algorithm for solving the restricted least squares problem. **81b:90116**
Contesse B., Luis Une caractérisation complète des minima locaux en programmation quadratique. (English summary) **81j:90095**
Cottle, Richard W. (*with* Goheen, Mark S.) A special class of large quadratic programs. **81c:90065**
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Gavurin, M. K. Development of the method of Theil and van de Panne in convex and nonconvex quadratic programming. (Russian) **81i:90163**
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Grewe, Heinz ★Anwendung ausgewählter Algorithmen der quadratischen Programmierung. (German) [Application of selected quadratic programming algorithms] **81c:90066**
Gulati, T. R. (*with* Chandra, Suresh) A note on symmetric dual quadratic programs in real and complex spaces. **81a:90123**
Hačijan, L. G. *See* **Kozlov, M. K.; et al., 81b:90117**
Helgason, R. V. (*with* Kennington, J. L.; Lall, H.) A polynomially bounded algorithm for a singly constrained quadratic program. **81h:90115**
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Malozëmov, V. N. *See* **Gavurin, M. K., 81f:90078**
McBride, R. D. (*with* Yormark, J. S.) An implicit enumeration algorithm for quadratic integer programming. **81i:90164**
Perold, André F. A generalization of the Frank-Wolfe theorem. **81j:90096**
Rakeckiĭ, V. M. A direct method for solving problems of quadratic programming. (Russian) **81h:90117**
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Tarasov, S. P. *See* **Kozlov, M. K.; et al., 81b:90117**
Tokareva, O. N. Use of quadratic programming problems for conditions of optimization. (Russian) **81i:90165**
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Bachem, Achim (*with* Korte, Bernhard) Minimum norm problems over transportation polytopes. **(81f:15021)**
Berna, T. J. *See* **Westerberg, A. W., (81h:65042)**

Bulavskiĭ, V. A. Relaxation in problems with inequalities. (Russian) **(81k:90122)**
Eriksson, Jan A note on solution of large sparse maximum entropy problems with linear equality constraints. **(81h:90136)**
Jaisingh, S. C. *See* **Lashkari, R. S., (81h:90048)**
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Korte, Bernhard *See* **Bachem, Achim, (81f:15021)**
Lashkari, R. S. (*with* Jaisingh, S. C.) A heuristic approach to quadratic assignment problem. **(81h:90048)**
McBride, R. D. (*with* Yormark, J. S.) Finding all solutions for a class of parametric quadratic integer programming problems. **(81i:90150)**
Mifflin, Robert A feasible descent algorithm for linearly constrained least squares problems. **(81b:65037)**
O'Leary, Dianne P. The block conjugate gradient algorithm and related methods. **(81i:65027)**
Picard, Jean-Claude (*with* Ratliff, H. Donald) A cut approach to a class of quadratic integer programming problems. **(81k:90066)**
Ratliff, H. Donald *See* **Picard, Jean-Claude, (81k:90066)**
Recknagel, R.-D. Quadratische Optimierung für Mixturen. (English summary) **(81d:62069)**
Scobey, P. (*with* Kabe, D. G.) Direct solutions to some linear and quadratic programming problems. **(81e:90064)**
Verina, L. F. A solution of a parametric quadratic programming problem. (Russian. English summary) **(81f:90105)**
Westerberg, A. W. (*with* Berna, T. J.) LASCALA—a language for large scale linear algebra. **(81h:65042)**
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90C25 Convex programming

Allwright, J. C. A feasible direction algorithm for convex optimization: global convergence rates. **81b:90118**
Arshad, M. (*with* Khalid, M. M.) Branch-and-bound method for some convex programs with linear constraints. **81a:90124**
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Ben-Israel, Adi *See* **Zlobec, S., 81f:90085** *and* **Ben-Tal, Aharon; et al., 81g:90071**
Benkő, Iosif Dual optimality criteria in absence of topology. **81f:90079**
Ben-Tal, Aharon (*with* Rosinger, E. E.; Ben-Israel, Adi) A Helly-type theorem and semi-infinite programming. **81g:90071**
Bitran, Gabriel R. (*with* Magnanti, T. L.) The structure of admissible points with respect to cone dominance. **81e:90077**
Charnes, A. (*with* Seiford, L.) Gradient states for some dualities with the C^2 extremal principle. **81e:90078**
Curkov, V. I. Decomposition in convex mathematical programming. (Russian. English summary) **81a:90125**
Duffin, Richard J. An elementary treatment of Lagrange multipliers. **81c:90068**
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Glashoff, Klaus Duality theory of semi-infinite programming. **81a:90126**
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Gros, Christian Generalization of Fenchel's duality theorem for convex vector optimization. **81c:90069**
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Hamala, M. Quasibarrier methods for convex programming. **81j:90097**
Hartung, Joachim Minimum norm solutions of convex programs. **81i:90166**
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An extension of a feasible directions algorithm to minimization of nondifferentiable convex functionals. **81i:90167**
Jefferson, T. R. (*with* Scott, C. H.) A duality theory for quasiconcave programs. **81f:90080**
Kanniappan, P. (*with* Sastry, Sundaram M. A.) A duality theorem for nondifferentiable convex programming with operatorial constraints. **81j:90098**
Kéri, Gerzson On the minimization of the general entropy function on a convex set. (Hungarian. English summary) **81a:90154**
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Kreĭnin, M. I. A relaxation subgradient algorithm for minimizing convex functions. (Russian) **81i:90168**
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Massam, Hélène M. Optimality conditions for a cone-convex programming problem. **81b:90122**
May, S. J. An application of Neustadt's abstract maximum principle to probability kinematics. **81a:90127**
Mazzoleni, Piera On constrained optimization for convex set functions. **81h:90119**
Movĭovič, S. M. The structure of level sets of the dual function and the convergence of some methods of convex programming. **81i:90169**
Németh, A. B. Strictly positive linear functionals and Pareto subgradients of minimal range. **81f:90082**
Nenahov, È. I. A variant of subgradient algorithms for minimization of nonsmooth functions. (Russian) **81g:90072**
Nožička, F. Spherical mappings of convex sets and convex parametrical optimization. **81i:90170**
Outrata, J. V. On the differentiability in dual optimal control problems. (Russian and German summaries) **81g:90073**
Extremal problems with an infinite number of inequality constraints. **81k:90079**
Peralba, Jean-Claude Caractérisation du sous-différentiel associé à un problème de minimisation convexe à contrainte vectorielle. Application au calcul des variations. (English summary) **81h:90120**
Phan Văn Chu'o'ng Version paramétrique du théorème de Krein-Mil'man et théorèmes de densité pour les applications multivoques mesurables. **81g:90074**
Poljak, R. A. Controlling sequence methods for the solution of dual problems of convex programming. (Russian) **81c:90071**
Pomerol, Jean-Charles Application de la programmation convexe à la programmation différentiable. (English summary) **81g:90075**
Poustein, J. Fenchel duality in Banach spaces. **81m:90088**
Posner, Marc E. *See* **Wu, Chu Tao, 81b:90124**
Pšeničnyĭ, B. N. ★Выпуклый анализ и экстремальные задачи. (Russian) [Convex analysis and extremal problems] **81k:90080**
Rosinger, E. E. *See* **Ben-Tal, Aharon; et al., 81g:90071**
Saint-Pierre, Jean Points exposés d'une multiapplication à valeurs convexes de $\mathbb{R}^n$. (English summary) **81j:90099**
Sastry, Sundaram M. A. *See* **Kanniappan, P., 81j:90098**
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Selford, L. *See* **Charnes, A., 81e:90078**
Sherali, Hanif D. (*with* Shetty, C. M.) On the generation of deep disjunctive cutting planes. **81k:90082**
Shetty, C. M. *See* **Sherali, Hanif D., 81k:90082**
Singer, Ivan A Fenchel-Rockafellar type duality theorem for maximization. **81m:90089**
Šor, N. Z. (*with* Geršovič, V. I.) Family of algorithms for solving convex programming problems. **81k:90083**
Tarasova, T. A. An iteration method for solving a convex programming problem with an infinite system of constraints. (Russian) **81f:90083**
Thakur, Lakshman S. Error analysis for convex separable programs: the piecewise linear approximation and the bounds on the optimal objective value. **81e:90080**
Error analysis for convex separable programs: bounds on optimal and dual optimal solutions. **81k:90084**
Tret'jakov, N. V. *See* **Gol'štein, E. G., 81e:90079**
Valutinskiĭ, I. Ja. A process of the iterative aggregation for the solution of the problem of convex, partially separable programming. (Russian) **81f:90084**
Venec, V. I. Differential inclusions in convex problems. **81e:90081**
Watson, G. Alistair A class of programming problems whose objective function contains a norm. **81b:90123**
Wolkowicz, Henry Convex programs with equivalent duals. **81h:90121**
Wu, Chu Tao (*with* Posner, Marc E.) A note on programming problem with maximin objective function. **81b:90124**
Zabotin, I. Ja. Methods for unconditional minimization of a function using a simplex. (Russian) **81m:90090**
Zlobec, S. (*with* Ben-Israel, Adi) Duality in convex programming: a linearization approach. (German and Russian summaries) **81f:90085**

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Alyoshi, Eitaro *See* **Shimizu, Kiyotaka, (81d:49022)**
Amangel'diev, B. R. Investigation of a method of a weighted sum of local criteria for solving a problem of vector optimization. (Russian. Kazakh summary) **(81g:90085)**
Attouch, Hédy (*with* Picard, Colette) Problèmes variationnels et théorie du potentiel non linéaire. (English summary) **(81h:31017)**
Bair, J. À propos des points extrêmes de la somme de deux ensembles convexes. (English summary) **(81m:52004)**
Baker, Brenda S. (*with* Coffman, E. G., Jr.; Rivest, Ronald L.) Orthogonal packings in two dimensions. **(81m:68034)**
Bangert, Victor Analytische Eigenschaften konvexer Funktionen auf Riemannschen Mannigfaltigkeiten. **(81e:53025)**
Bazaraa, Mokhtar S. (*with* Goode, Jamie J.; Rardin, Ronald L.) An algorithm for finding the shortest element of a polyhedral set with application to Lagrangian duality. **(81e:90083)**
Benker, Hans Quadratische Probleme der optimalen Steuerung. **(81b:49013)**
Beresnev, V. V. Method of nonsmooth penalty functions and the theory of extremum problems in Banach space. **(81d:49017)**
Bittner, Leonhard Extension theorems of Hahn-Banach type and monotone operators. **(81f:46007)**
Bojanov, Borislav D. *See* **Tihomirov, V. M., (81a:41062)**
Capuzzo Dolcetta, I. (*with* Matzeu, Michele) Duality for implicit variational problems and numerical applications. **(81m:49007)**
Coffman, E. G., Jr. *See* **Baker, Brenda S.; et al., (81m:68034)**
Craven, B. D. On constrained maxima and minima. **(81a:90134)**
Dem'janov, V. F. *See* **Vasil'ev, L. V., (81b:49016)**
Deumlich, Reinhard (*with* Elster, Karl-Heinz; Nehse, Reinhard) Recent results on separation of convex sets. (German and Russian summaries) **(81m:52005)**
Dierolf, Peter (*with* Voigt, Jürgen) Weak compactness of Fréchet derivatives: application to composition operators. **(81h:47062)**
Ekeland, Ivar (*with* Temam, Roger) ★Выпуклый анализ и вариационные проблемы. (Russian) [Convex analysis and variational problems] **(81b:49002)**
Elster, Karl-Heinz *See* **Deumlich, Reinhard; et al., (81m:52005)**
Ewald, Günter Über die algorithmische Lösung des Steinitzproblems einer inneren Kennzeichnung polytopaler Sphären. **(81j:52005)**
Fučík, Svatopluk (*with* Kufner, Alois) ★Nonlinear differential equations. **(81e:35001)**
Galvoronskiĭ, A. A. A method of solving an extremal problem with constraints. (Russian) **(81e:49030)**
Gallo, Giorgio (*with* Sodini, Claudio) Extreme points and adjacency relationship in the flow polytope. **(81d:90043)**
(*with* Sodini, Claudio) Concave cost minimization on networks. **(81c:90037)**
Goode, Jamie J. *See* **Bazaraa, Mokhtar S.; et al., (81e:90083)**
Gregory, David A. Upper semicontinuity of subdifferential mappings. **(81e:46009)**

Grygarová, Libuše (*with* Nožička, F.) Über asymptotische Berührung von konvexen Mengen. **(81a:52005)**
Asymptotische Berührung von zwei konvexen Mengen in (bestimmter) Richtung. (Czech summary) **(81c:52004)**
Hillestad, Richard J. (*with* Jacobsen, Stephen E.) Reverse convex programming. **(81d:90089)**
Hobotov, E. N. Use of extrapolation method for solving convex problems of control of digital processes. **(81h:49024)**
Hiol, C. A unified approach of the descent methods for minimization of convex functionals. I. General theory. **(81d:49021a)**
A unified approach of the descent methods for minimization of convex functionals. II. Steplength algorithms. **(81d:49021b)**
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Kac, A. S. The best approximation of an element of a Banach space, with respect to a system of seminorms. (Russian) **(81b:41087)**
Kovalev, M. M. (*with* Milanov, P. B.) Minimization of a discrete convex function on Jordan-Dedekind lattices. (Russian. English summary) **(81k:06002)**
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Kulshrestha, D. K. *k*-convexity. **(81f:26009)**
Kusraev, A. G. (*with* Kutateladze, S. S.) The Rockafellar convolution and the characterization of optimal trajectories. (Russian) **(81f:49005)**
Kutateladze, S. S. Linear problems of convex analysis. (Russian) **(81f:52003)**
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Menon, Ségla Famille mesurable d'opérateurs maximaux monotones. (English summary) **(81e:47042)**
Michael, Ernest A. (*with* Pixley, C.) A unified theorem on continuous selections. **(81m:54025a)**
Continuous selections and finite-dimensional sets. **(81m:54025b)**
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Moreau, Jean-Jacques Application of convex analysis to some problems of dry friction. **(81e:73091)**
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Nenahov, È. I. (*with* Rževskiĭ, S. V.) A means of reconstructing unconditional minimization algorithms. (Russian) **(81h:65074)**
Nožička, F. *See* **Grygarová, Libuše, (81a:52005)**
Nurminskiĭ, E. A. *See* **Lemaréchal, Claude, (81m:46060)**
Pellrins, Rainer Konvexitätsaussagen beim stochastischen linearen Programmieren mit Wahrscheinlichkeitsrestriktionen. **(81g:90069)**
Picard, Colette *See* **Attouch, Hédy, (81h:31017)**
Pixley, C. *See* **Michael, Ernest A., (81m:54025a)**
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Rževskiĭ, S. V. *See* **Nenahov, È. I., (81h:65074)**
Sallnetti, Gabriella (*with* Wets, Roger J.-B.) Addendum: "On the convergence of convex sets in finite dimensions" [SIAM Rev. **21** (1979), no. 1, 18–33; MR 80h:52007]. **(81g:52006)**
Schulz, Konrad (*with* Schwartz, Bernd) Finite extensions of convex functions. (Russian and German summaries) **(81c:26011)**
Schwartz, Bernd *See* **Schulz, Konrad, (81c:26011)**
Shimizu, Kiyotaka (*with* Aiyoshi, Eitaro) Necessary conditions for min-max problems and algorithms by a relaxation procedure. **(81d:49022)**
Singer, Ivan Maximization of lower semicontinuous convex functionals on bounded subsets of locally convex spaces. I. Hyperplane theorems. **(81d:49012)**
Duality theorems for linear systems and convex systems. **(81k:90106)**
Sodini, Claudio *See* **Gallo, Giorgio, (81c:90037)** *and* **Gallo, Giorgio, (81d:90043)**
Studniarski, Marcin Application of the Dubovitskii-Milyutin method to some locally convex extremal problems. (Polish summary) **(81f:49022a)**
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Masud, Abu Syed Md. *See* **Hwang, Ching Lai, (81d:90001)**

Mazzoleni, Piera A property of monotone operators for problems of vector optimization. (Italian. English summary) **(81h:90129)**

McBride, R. D. (*with* Yormark, J. S.) Finding all solutions for a class of parametric quadratic integer programming problems. **(81i:90150)**

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Orlovskiĭ, S. A. On formalization of a general fuzzy mathematical problem. **(81d:90004)**

(Paldy, Sudhakar R.) *See* **Hwang, Ching Lai; et al., (81d:90001)**

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Ravindran, A. *See* **Arthur, Jeffrey L., (81f:90066)**

Robinson, Stephen M. Strongly regular generalized equations. **(81m:90109)**

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Sakawa, Masatoshi Decomposition approaches to large-scale multiobjective reliability design. **(81h:90066)**

Saxena, P. C. (*with* Aggarwal, S. P.) Parametric linear fractional functional programming. **(81f:90107)**

Serafini, P. *See* **Marzollo, Angelo; et al., (81j:58034)**

Soland, Richard M. *See* **Ross, G. Terry, (81g:90047)**

Somers, Janet (*with* Adler, Ilan) The max-flow problem with parametric capacities. **(81f:90047)**

Voogd, H. Stochastic multicriteria evaluation by means of geometric scaling. **(81g:92030)**

(Yoon, Kwangsun) *See* **Hwang, Ching Lai; et al., (81d:90001)**

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Žilinskas, Antanas On the use of statistical models of multimodal functions for the construction of the optimization algorithms. **(81m:65110)**

90C32 Fractional programming

Aggarwal, S. P. *See* **Saxena, P. C., 81f:90107**

Beale, E. M. L. Fractional programming with zero-one variables. **81e:90099**

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Chandra, Suresh (*with* Chandramohan, M.) An improved branch and bound method for mixed integer linear fractional programs. **81a:90148**

(*with* Chandramohan, M.) A note on integer linear fractional programming. **81a:90132**

Chandramohan, M. *See* **Chandra, Suresh, 81a:90132** *and* **Chandra, Suresh, 81a:90148**

Duca, Dorel I. The hierarchy of extremal solutions in a problem of fractional programming. (Romanian. English summary) **81k:90097**
Eriksson, Jan A note on solution of large sparse maximum entropy problems with linear equality constraints. **81h:90136**
Guisti, T. R. Duality for a nondifferentiable fractional program. **81b:90144**
Gupta, A. K. *See* **Sharma, J. K.; et al., 81e:90100**
Gupta, M. P. *See* **Sharma, J. K.; et al., 81e:90100**
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Mond, B. (*with* Schechter, Murray) Duality in homogeneous fractional programming. **81k:90098**
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Patkar, Vivek *See* **Saxena, P. C.; et al., 81b:90145**
Saxena, P. C. (*with* Patkar, Vivek; Parkash, Om) Linear fractional functional programming in complex space. **81b:90145**
(*with* Aggarwal, S. P.) Parametric linear fractional functional programming. **81f:90107**
Schechter, Murray *See* **Mond, B., 81k:90098**
Scott, C. H. (*with* Jefferson, T. R.) Fractional programming duality via geometric programming duality. **81i:90187**
Seshan, C. R. An algorithm for ranking the extreme points for a linear fractional objective function. **81m:90102**
Sharma, J. K. (*with* Gupta, A. K.; Gupta, M. P.) Extension of simplex technique for solving fractional programming problem. **81e:90100**
Shivpuri, Saroj (*with* Chadha, S. S.) Multiparametric linear fractional functionals programming. **81e:90101**
Solomon, D. I. Generalized problems of linear fractional programming. (Russian) **81c:90086**

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Bakhshi, H. C. (*with* Puri, M. C.) An efficient technique for extreme point mathematical programming problems. **(81c:90053)**
Černov, Ju. P. (*with* Lange, È. G.) ★Задачи нелинейного программирования с удельными экономическими показателями. (Russian) [Nonlinear programming problems with specific economic indices] **(81b:90129)**
Lange, È. G. *See* **Černov, Ju. P., (81b:90129)**
Megiddo, Nimrod Combinatorial optimization with rational objective functions. (*See* **80b:68003**)
Puri, M. C. *See* **Bakhshi, H. C., (81c:90053)**

90C33 Linear and nonlinear complementarity problems

Bárány, Imre Borsuk's theorem through complementary pivoting. **81d:90099**
Cryer, Colin W. (*with* Dempster, M. A. H.) Equivalence of linear complementarity problems and linear programs in vector lattice Hilbert spaces. **81a:90149**
Dempster, M. A. H. *See* **Cryer, Colin W., 81a:90149**
Habetler, George J. (*with* Kostreva, Michael M.) Sets of generalized complementarity problems and *P*-matrices. **81i:90188**
Kaneko, Ikuyo A linear complementarity problem with an $n \times 2n$ "P"-matrix. **81e:90102**
Karčicka, Dimitra I. A parametric linear complementarity problem with matrices of Leontief type. (Macedonian. English summary) **81d:90100a**
A parametric linear complementarity problem with negative matrices of Leontief type. (Macedonian. English summary) **81d:90100b**
Kostreva, Michael M. *See* **Habetler, George J., 81i:90188**
Lemke, C. E. Some pivot schemes for the linear complementarity problem. **81c:90087**
A brief survey of complementarity theory. **81d:90101**
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McLinden, L. The complementarity problem for maximal monotone multifunctions. **81h:90137**
Nanda, Sribatsa (*with* Patel, Ujagar) A nonlinear complementarity problem for monotone functions. **81i:90189a**
(*with* Nanda, Sudarsan) A nonlinear complementarity problem in mathematical programming in Hilbert space. **81i:90189b**
Nanda, Sudarsan *See* **Nanda, Sribatsa, 81i:90189b**
Parida, J. (*with* Sahoo, B.) On the complementarity problem over polyhedral cone. **81i:90190**
Paris, Quirino Consistent aggregation of linear complementarity problems. **81d:90102**
Patel, Ujagar *See* **Nanda, Sribatsa, 81i:90189a**
Sahoo, B. *See* **Parida, J., 81i:90190**
Sengupta, Jati K. Complementarity theorems in stochastic programming. **81d:90103**

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Bard, Jonathan F. (*with* Falk, James E.) Computing equilibria via nonconvex programming. **(81g:90024)**
Capuzzo Dolcetta, I. (*with* Mosco, Umberto) Implicit complementarity problems and quasivariational inequalities. **(81i:49003)**
Cottle, Richard W. (*with* von Randow, Rabe) A theorem on the partitioning of simplotopes and its application to a property of *Q*-matrices. **(81e:52005)**
See also **Variational inequalities and complementarity problems, (81d:49001)**
Craven, B. D. Strong vector minimization and duality. (German and Russian summaries) **(81i:90182)**
Falk, James E. *See* **Bard, Jonathan F., (81g:90024)**
Forster, Walter An application of the generalized Sperner lemma to the computation of fixed points in arbitrary complexes. **(81d:55003)**
Giannessi, F. Theorems of alternative, quadratic programs and complementarity problems. **(81j:49021)**
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Grigor'jan, K. A. (*with* Svešnikov, V. I.) Precision of the requirements of mathematical models solved by geometric programming. **(81h:90018)**
Karčicka, Dimitra L. On a dual pair of LP-problems. (Macedonian summary) **(81d:90068)**
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Mosco, Umberto *See* **Capuzzo Dolcetta, I., (81i:49003)**
von Randow, Rabe *See* **Cottle, Richard W., (81e:52005)**
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Watson, Layne T. Computational experience with the Chow-Yorke algorithm. **(81g:65078)**
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Erice ★Variational inequalities and complementarity problems. **(81d:49001)**
Inequalities ★Variational inequalities and complementarity problems. **(81d:49001)**
School:
Variational Inequalities and Complementarity Problems in Mathematical Physics and Economics ★Variational inequalities and complementarity problems. **(81d:49001)**
Variational inequalities and complementarity problems ★Variational inequalities and complementarity problems. **(81d:49001)**

90C35 Network programming, programming in networks

Ali, A. (*with* Helgason, R. V.; Kennington, J. L.; Lall, H.) Computational comparison among three multicommodity network flow algorithms. **81i:90191**
Aneja, Y. P. An integer linear programming approach to the Steiner problem in graphs. **81i:90192**
Burdjuk, V. Ja. (*with* Deĭneko, V. G.) Solvable cases of the traveling salesman problem with several salesmen. (Russian) **81f:90108**
Carpaneto, Giorgio (*with* Toth, Paolo) Some new branching and bounding criteria for the asymmetric travelling salesman problem. **81i:90193**
Deĭneko, V. G. *See* **Burdjuk, V. Ja., 81f:90108**
Frederickson, Greg N. (*with* Johnson, Donald B.) Generating and searching sets induced by networks (preliminary version). **81j:90120**
Frieze, A. M. An algorithm for algebraic assignment problems. **81e:90103**
Gerlovin, È. L. (*with* Srogovič, E. B.) Methods for solving nonlinear network transport problems. (Russian) **81e:90104**
Helgason, R. V. *See* **Ali, A.; et al., 81i:90191**
Hu, T. C. (*with* Ruskey, Frank) Circular cuts in a network. **81j:90121**
Jewell, William S. Introduction to isotonic estimation. **81j:90122**
Johnson, Donald B. *See* **Frederickson, Greg N., 81j:90120**
Kennington, J. L. *See* **Ali, A.; et al., 81i:90191**
Klee, Victor Combinatorial optimization: what is the state of the art? **81b:90146**
Lall, H. *See* **Ali, A.; et al., 81i:90191**
Laporte, Gilbert (*with* Nobert, Yves) A cutting planes algorithm for the *m*-salesmen problem. **81j:90123**
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Nobert, Yves *See* **Laporte, Gilbert, 81j:90123**
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Queyranne, Maurice Theoretical efficiency of the algorithm "capacity" for the maximum flow problem. **81g:90092**
Ramakrishnan, K. G. Solving two-commodity transportation problems with coupling constraints. **81j:90124**
Ruskey, Frank *See* **Hu, T. C., 81j:90121**
Sharma, J. K. (*with* Swarup, Kanti) Time minimization in transportation problems. **81f:90109**
Sigal, C. Elliott (*with* Pritsker, A. Alan B.; Solberg, James J.) The use of cutsets in Monte Carlo analysis of stochastic networks. **81a:90150**
Smith, J. MacGregor (*with* Liebman, Judith S.) An $O(n^2)$ heuristic algorithm for the directed Steiner minimal tree problem. **81i:90194**
Solberg, James J. *See* **Sigal, C. Elliott; et al., 81a:90150**
Srogovič, E. B. *See* **Gerlovin, È. L., 81e:90104**
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Tone, Kaoru On optimal pattern flows. **81j:90125**
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Xie, Li Tong Programming problems on *n*-complexes. **81k:90100**

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Alekseev, O. G. (*with* Meržanov, V. Ju.) Problem of optimal distribution of resources. **(81j:90060)**
Aneja, Y. P. (*with* Nair, K. P. K.) Two problems in multicommodity networks. (French summary) **(81c:90036)**
Armstrong, Ronald D. (*with* Klingman, Darwin; Whitman, David) Implementation and analysis of a variant of the dual method for the capacitated transshipment problem. **(81e:90038)**
Blonlarz, Peter A shortest-path algorithm with expected time $O(n^2 \log n \log^* n)$. (*See* **81j:68006**)
Bodin, Lawrence D. *See* **Golden, Bruce L.; et al., (81d:90060)**
Demidenko, V. M. Special cases of the traveling salesman problem with a symmetric matrix. (Russian. English summary) **(81i:90144)**
Denardo, Eric V. (*with* Fox, Bennett L.) Enforcing constraints on expanded networks. **(81i:90145)**
Dionne, René (*with* Florian, M.) Exact and approximate algorithms for optimal network design. **(81f:90044)**
Dokučaev, V. N. Analysis of a network model of delivery control. (Russian) **(81d:90042)**
Doyle, T. *See* **Golden, Bruce L.; et al., (81d:90060)**
Elam, Joyce J. (*with* Glover, Fred; Klingman, Darwin) A strongly convergent primal simplex algorithm for generalized networks. **(81g:90049)**

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Florian, M. *See* **Dionne, René**, **(81f:90044)**
Fox, Bennett L. *See* **Denardo, Eric V.**, **(81i:90145)**
Gallo, Giorgio (*with* Sodini, Claudio) Concave cost minimization on networks. **(81c:90037)**
Galvão, Roberto D. A dual-bounded algorithm for the p-median problem. **(81i:90064)**
Glover, Fred (*with* Klingman, Darwin; Mote, John; Whitman, David) An extended abstract of an indepth algorithmic and computational study for maximum flow problems. **(81j:90047)**
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Golden, Bruce L. (*with* Bodin, Lawrence D.; Doyle, T.; Stewart, W., Jr.) Approximate traveling salesman algorithms. **(81d:90060)**
Grötschel, Martin On the symmetric travelling salesman problem: solution of a 120-city problem. **(81j:90081)**
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Ibaraki, Toshihide Theoretical and simulation studies on computational performance of branch-and-bound algorithms. **(81h:90099)**
Kemper, F. M. An algorithm for formation of the essential constraints of a transport problem with prohibitions. (Russian) **(81b:90070)**
Klingman, Darwin *See* **Armstrong, Ronald D.; et al.**, **(81e:90038)**; **Elam, Joyce J.; et al.**, **(81g:90049)** *and* **Glover, Fred; et al.**, **(81j:90047)**
Marsten, Roy E. (*with* Muller, Michael R.) A mixed-integer programming approach to air cargo fleet planning. **(81k:90051)**
Martinec, Ivan A combinatorial method for the solution of the travelling salesman problems. (Czech. English summary) **(81a:90084)**
Mehta, Cyrus R. (*with* Patel, Nitin R.) A network algorithm for the exact treatment of the $2\times k$ contingency table. **(81m:62098)**
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Mote, John *See* **Glover, Fred; et al.**, **(81j:90047)**
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Nemhauser, George L. *See* **Fisher, Marshall L.; et al.**, **(81d:05047)**
Nguèn Van Vî Some classes of problems on adm[illegible]le dynamical flow with minimum time. (Russian. English summary) **(81f:90046)**
Padberg, Manfred W. (*with* Hong, Saman) On the symmetric travelling salesman problem: a computational study. **(81j:90082)**
Patel, Nitin R. *See* **Mehta, Cyrus R.**, **(81m:62098)**
Plaisted, David A. *See* **Supowit, Kenneth J.; et al.**, (*See* **81j:68006**)
Reif, John H. (*with* Spirakis, Paul G.) Random matroids. (*See* **81j:68006**)
Reingold, Edward M. *See* **Supowit, Kenneth J.; et al.**, (*See* **81j:68006**)
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Supowit, Kenneth J. (*with* Plaisted, David A.; Reingold, Edward M.) Heuristics for weighted perfect matching. (*See* **81j:68006**)
Sz. Turchányi, Piroska On the optimization problems in packet-switching networks. (Hungarian. English summary) **(81e:90044)**
Walther, Hansjoachim ★Anwendungen der Graphentheorie. (German) [Applications of graph theory] **(81k:90035)**
Whitman, David *See* **Armstrong, Ronald D.; et al.**, **(81e:90038)** *and* **Glover, Fred; et al.**, **(81j:90047)**
Wolsey, Laurence A. *See* **Fisher, Marshall L.; et al.**, **(81d:05047)**
Yuan, L. *See* **Hadlock, Frank**, **(81g:90058)**
Zemanian, A. H. Some models in the social and behavioral sciences based on proportioning networks. **(81d:90044)**
Zipkin, Paul H. Bounds for aggregating nodes in network problems. **(81f:90048)**

90C39 Dynamic programming [See also 49Cxx.]

Bajaj, C. P. (*with* Jain, J. P.) Some optimal path problems subject to improvements. (German summary) **81i:90195**
Beleckiĭ, S. A. Increased effectiveness of the dynamic programming method in the solution of a class of discrete optimization problems. (Russian) **81i:90196**
Casti, John L. *See* **Larson, Robert E.**, **81i:90198**
Cvetanov, Ilija P. (*with* Dončev, Asen L.; Georgieva, Katja) Method of optimal synthesis of control distributed processes. (Bulgarian. Russian and English summaries) **81f:90110**
Dončev, Asen L. *See* **Cvetanov, Ilija P.; et al.**, **81f:90110**
Egle, Kuno Dynamic optimization in compact spaces. **81a:90151**
Eremin, I. I. (*with* Mazurov, Vl. D.) ★Нестационарные процессы математического программирования. (Russian) [Nonstationary processes of mathematical programming] **81f:90111**
Flynn, James On optimality criteria for dynamic programs with long finite horizons. **81m:90103**
Georgieva, Katja *See* **Cvetanov, Ilija P.; et al.**, **81f:90110**
Hartley, Roger Inequalities for a class of sequential stochastic decision processes. **81m:90104**
A simple proof of Whittle's bridging condition in dynamic programming. **81m:90105**
Jain, J. P. *See* **Bajaj, C. P.**, **81i:90195**
Jušhevič, A. A. Controllable jump-like Markov models. (Russian. English summary) **81k:90101**
Kancer, N. V. A method of simultaneous solution of direct and dual linear dynamic programming problems. (Russian) **81b:90147**
Kebec, E. P. Set-theoretic approach to synthesis of decision-making algorithms. (Russian) **81i:90197**
Larson, Robert E. (*with* Casti, John L.) ★Principles of dynamic programming. Part I. **81i:90198**
Maslov, V. N. A matrix algorithm of dynamic programming as applied to problems of optimization of parametric series. (Russian) **81d:90104**
Mazurov, Vl. D. *See* **Eremin, I. I.**, **81f:90111**
Sladký, Karel Successive approximation methods for dynamic programming models. (*See* **81j:93007**)
On dynamic programming with separable utility criteria. (Russian summary) **81a:90152**
Whittle, P. Stability and characterisation conditions in negative programming. **81j:90126**
Yao, F. Frances Efficient dynamic programming using quadrangle inequalities. (*See* **81j:68006**)

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Bellman, Richard (*with* Lee, E. Stanley) Functional equations in dynamic programming. **(81e:39002)**
Beresnev, V. L. (*with* Gimadi, È. H.; Dement'ev, V. T.) ★Экстремальные задачи стандартизации. (Russian) [Extremal standardization problems] **(81f:90065)**
Bookbinder, James H. (*with* Sethi, Suresh P.) The dynamic transportation problem: a survey. **(81a:90081)**
Chikte, Shirish D. Optimal sequential selection and resource allocation under uncertainty. **(81k:90103)**
Christofides, Nicos (*with* Mingozzi, Aristide; Toth, Paolo) Dynamic loading and unloading of liquids into tanks. **(81d:90074)**
Dement'ev, V. T. *See* **Beresnev, V. L.; et al.**, **(81f:90065)**
Díaz, José The δ-operator. **(81i:68058)**
Gimadi, È. H. *See* **Beresnev, V. L.; et al.**, **(81f:90065)**
Gurman, V. I. (*with* Rasina, I. V.) Sufficient conditions for a relative minimum for discrete systems. (Russian) **(81i:90176)**
Halanay, Aristide (*with* Popoviciu, Nicolae) Remarks on the optimal control of a finite state discrete Markov chain with varying time probabilities. **(81m:90106)**
Hatoyama, Yukio A replacement problem with trade-in. (Japanese summary) **(81k:90043)**
van Hunen, Jo. (*with* Wessels, Jaap) Successive approximations for Markov decision processes and Markov games with unbounded rewards. (German and Russian summaries) **(81f:90114)**
Ibaraki, Toshihide Branch-and-bound procedure and state-space representation of combinatorial optimization problems. **(81e:90053)**
Lee, E. Stanley *See* **Bellman, Richard**, **(81e:39002)**
Mehlmann, Alexander An approach to optimal recruitment and transition strategies for manpower systems using dynamic programming. **(81j:90045)**
Mingozzi, Aristide *See* **Christofides, Nicos; et al.**, **(81d:90074)**
Nachman, David C. Optimal stopping with a horizon constraint. **(81d:90058)**
Nazarov, B. Basis for the application of dynamic programming to the variational problems of Bolza and Mayer. (Russian) **(81c:49011)**
van Nunen, J. A. E. E. (*with* Wessels, Jaap) A note on dynamic programming with unbounded rewards. **(81i:90202)**
Page, E. S. (*with* Wilson, L. B.) ★An introduction to computational combinatorics. **(81d:68001)**
Popoviciu, Nicolae *See* **Halanay, Aristide**, **(81m:90106)**
Pulliam, H. Ronald *See* **Vincent, Thomas L.**, **(81d:92022)**
Rasina, I. V. *See* **Gurman, V. I.**, **(81i:90176)**
Rosenthal, Arnie Optimal mass production. **(81e:68034)**
Rupšys, P. Control functions in discrete-time optimal control systems. (Russian. Lithuanian and English summaries) **(81c:93057)**
Sethi, Suresh P. *See* **Bookbinder, James H.**, **(81a:90081)**
Toth, Paolo *See* **Christofides, Nicos; et al.**, **(81d:90074)**
Vincent, Thomas L. (*with* Pulliam, H. Ronald) Evolution of life history strategies for an asexual annual plant model. **(81d:92022)**
Wessels, Jaap *See* **van Hunen, Jo.**, **(81f:90114)** *and* **van Nunen, J. A. E. E.**, **(81i:90202)**
Wilson, L. B. *See* **Page, E. S.**, **(81d:68001)**
Wu, Y. W. Adaptive control of systems with structural colored noise. **(81m:93092)**
Yasuda, Masami The calculation of limit probabilities for Markov jump processes. **(81f:60101)**

90C40 Markov decision processes; Markov programming and Markov renewal programming

Basu, Sujit K. *See* **Bhattacharjee, Manish C.**, **81k:90102**
Bhattacharjee, Manish C. (*with* Basu, Sujit K.) On the Kesten-Spitzer algorithm for minimal hitting time in controlled Markov chains. **81k:90102**
Chikte, Shirish D. Optimal sequential selection and resource allocation under uncertainty. **81k:90103**
Denardo, Eric V. (*with* Rothblum, Uriel G.) Optimal stopping, exponential utility, and linear programming. **81b:90148**
Dirickx, Yvo M. I. (*with* Rao, M. R.) Linear programming methods for computing gain-optimal policies in Markov decision models. **81d:90105**
Dong, Ze Qing Continuous time Markovian decision programming with average return criterion—countable state and action sets. **81k:90104**
Doshi, Bharat Policy improvement algorithm for continuous time Markov decision processes with switching costs. **81b:90149**
van der Duyn Schouten, Frank A. *See* **Hordijk, Arie**, **81e:90106**
Fainberg, E. A. The ergodicity condition for finite controllable Markov chains with arbitrary sets of solutions. (Russian) **81k:90105**
ε-optimal control of a finite Markov chain with average criterion. (Russian. English summary) **81e:90105**
Federgruen, Awi (*with* Hordijk, Arie; Tijms, H. C.) Denumerable state semi-Markov decision processes with unbounded costs, average cost criterion. **81b:90150**
Furukawa, Nagata Characterization of optimal policies in vector-valued Markovian decision processes. **81i:90199**

Gani, Ja. G. Stochastic system behavior described by semirenewal process. **81f:90112**
Glazebrook, K. D. Stoppable families of alternative bandit processes. **81c:90088**
Halanay, Aristide (*with* Popoviciu, Nicolae) Remarks on the optimal control of a finite state discrete Markov chain with varying time probabilities. **81m:90106**
Hastings, N. A. J. (*with* Sadjadi, D.) Markov programming with policy constraints. **81i:90200**
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Hordijk, Arie (*with* van der Duyn Schouten, Frank A.) Discretization procedures for continuous time decision processes. **81e:90106**
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Hübner, Gerhard Bounds and good policies in stationary finite-stage Markovian decision problems. **81f:90113**
van Hunen, Jo. (*with* Wessels, Jaap) Successive approximations for Markov decision processes and Markov games with unbounded rewards. (German and Russian summaries) **81f:90114**
Jušкевič, A. A. Reduction of the jump Markov control model to a discrete time model. (Russian. English summary) **81f:90115**
Kockelkorn, U. Ein lineares Mehrentscheidungsmodell. (English summary) **81d:90106**
Krainak, Joseph *See* **Speyer, Jason L.; et al., 81j:90128**
Marcus, Steven *See* **Speyer, Jason L.; et al., 81j:90128**
van Nunen, J. A. E. E. (*with* Wessels, Jaap) A note on dynamic programming with unbounded rewards. **81i:90202**
Popoviciu, Nicolae *See* **Halanay, Aristide, 81m:90106**
Rao, M. R. *See* **Dirickx, Yvo M. I., 81d:90105**
Robinson, D. R. Optimality conditions for a Markov decision chain with unbounded costs. **81m:90107**
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Sawaki, Katsushige Piecewise linear dynamic programs with applications. (Japanese summary) **81k:90106**
Serfozo, Richard F. An equivalence between continuous and discrete time Markov decision processes. **81j:90127**
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Speyer, Jason L. (*with* Marcus, Steven; Krainak, Joseph) A decentralized team decision problem with an exponential cost criterion. **81j:90128**
Stein, William E. Optimal stopping in a fuzzy environment. **81d:90108**
Sutherland, W. R. S. Optimality in transient Markov chains and linear programming. **81j:90129**
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Tijms, H. C. *See* **Federgruen, Awi; et al., 81b:90150**
Vickson, R. G. Generalized value bounds and column reduction in finite Markov decision problems. **81a:90153**
van der Wal, J. *See* **van Hee, Kees M., 81i:90201**
Waldmann, K.-H. An extrapolation method for Bayesian control of Markov chains. **81g:90093**
Wessels, Jaap *See* **van Hunen, Jo., 81f:90114** *and* **van Nunen, J. A. E. E., 81i:90202**
White, D. J. Finite state approximations for denumerable-state infinite horizon contracted Markov decision processes: the policy space method. **81j:90130**
Whitt, Ward Approximations of dynamic programs. I. **81j:90131a**
Approximations of dynamic programs. II. **81j:90131b**
Yasuda, Masami Semi-Markov decision processes with countable state space and compact action space. **81b:90151**
Policy improvement in Markov decision processes and Markov potential theory. **81b:90152**

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Aggarwal, Vijaykumar (*with* Nair, K. P. K.; Chandrasekaran, R.) Nonterminating stochastic ratio game. (French summary) **(81b:90175)**
(*with* Chandrasekaran, R.; Nair, K. P. K.) Discounted stochastic ratio games. **(81g:90105)**
Anderson, Brian D. O. *See* **Potter, John M., (81g:62012)**
Chandrasekaran, R. *See* **Aggarwal, Vijaykumar; et al., (81b:90175)** *and* **Aggarwal, Vijaykumar; et al., (81g:90105)**
Chew, K. L. Domination structures in abstract spaces. **(81j:90111)**
Dauer, Jerald P. (*with* Krueger, Robert J.) Multiobjective screening model for water resources planning. (*See* **81i:90005**)
Engelbert, Alfred (*with* Engelbert, Hans-Jürgen) Über Eigenschaften der Wertfunktion *s* beim Problem des optimalen Stoppens von Markov-Prozessen. (Russian and English summaries) **(81m:60076)**
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Federgruen, Awi Successive approximation methods in undiscounted stochastic games. **(81d:93058)**
Gössel, Michael (*with* Sragovič, V. G.) Adaptive control of Markov chains with rewards. (Russian) **(81k:93079)**
Halanay, Aristide (*with* Popoviciu, Nicolae) Remarks on the optimal control of a continuous time Markov chain with varying probabilities. **(81b:93082)**
Hartley, Roger Inequalities for a class of sequential stochastic decision processes. **(81m:90104)**
Jušкевič, A. A. Controllable jump-like Markov models. (Russian. English summary) **(81k:90101)**
Kebec, E. P. Set-theoretic approach to synthesis of decision-making algorithms. (Russian) **(81i:90197)**
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Krueger, Robert J. *See* **Dauer, Jerald P., (*See* 81i:90005)**
Levy, Haim (*with* Kroll, Yoram) Efficiency analysis with borrowing and lending: criteria and their effectiveness. **(81b:90019)**
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Mandl, Petr On aggregating controlled Markov chains. **(81j:60076)**
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Miethe, Manfred Die Untersuchung der Grenzverteilung des körperlichen Bestandsprozesses in einem semi-Markovschen Lagerhaltungsmodell. (English and Russian summaries) **(81b:90063)**
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Neave, Edwin H. (*with* Petersen, Edward R.) A comparison of optimal and adaptive decision mechanisms in an organizational setting. **(81j:90004)**
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Popoviciu, Nicolae *See* **Halanay, Aristide, (81b:93082)**
Potter, John M. (*with* Anderson, Brian D. O.) Partial prior information and decision-making. **(81g:62012)**
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Serov, G. P. *See* **Komolov, S. V.; et al., (81j:90090)**
Shreve, Steven E. Resolution of measurability problems in discrete-time stochastic control. **(81j:93065)**
Sragovič, V. G. *See* **Gössel, Michael, (81k:93079)**
Tamaki, Mitsushi Secretary problem with uncertain employment when backward solicitation is permitted. **(81a:90172)**
Whitt, Ward A priori bounds for approximations of Markov programs. **(81b:90088)**
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Whittle, P. Stability and characterisation conditions in negative programming. **(81j:90126)**
Yasuda, Masami The calculation of limit probabilities for Markov jump processes. **(81f:60101)**

90C48 Programming in abstract spaces

Abrham, Jaromír (*with* Buie, R. N.) Kuhn-Tucker conditions and duality in continuous programming. **81j:90132**
Alt, Walter Stabilität mengenwertiger Abbildungen mit Anwendungen auf nichtlineare Optimierungsprobleme. **81c:90089**
Buie, R. N. *See* **Abrham, Jaromír, 81j:90132**
Gros, Christian Approche de la dualité en optimisation multicritère. **81f:90116**
Hettich, R. (*with* van Honstede, W.) On quadratically convergent methods for semi-infinite programming. **81e:90107**
Hoffmann, Karl-Heinz (*with* Kornstaedt, Hans-Joachim) Higher-order necessary conditions in abstract mathematical programming. **81c:90090**
van Honstede, W. *See* **Hettich, R., 81e:90107**
Kornstaedt, Hans-Joachim *See* **Hoffmann, Karl-Heinz, 81c:90090**
Lempio, F. (*with* Maürer, Helmut) Differential stability in infinite-dimensional nonlinear programming. **81m:90108**
Levine, P. (*with* Pomerol, Jean-Charles) Sufficient conditions for Kuhn-Tucker vectors in convex programming. **81a:90155**
Maürer, Helmut *See* **Lempio, F., 81m:90108**
Nieuwenhuis, J. W. Another application of Guignard's generalized Kuhn-Tucker conditions. **81g:90094**
Pavlov, V. N. Effectiveness of approximate optimization of complex systems. (Russian) **81b:90153**
Pinsker, A. G. General problem of linear optimization in *K*-spaces. (Russian) **81j:90133**
Pomerol, Jean-Charles *See* **Levine, P., 81a:90155**
Robinson, Stephen M. Strongly regular generalized equations. **81m:90109**
Rolewicz, Stefan Multifunctions and optimization. **81h:90138**
Singer, Ivan Duality theorems for linear systems and convex systems. **81k:90108**
Strekalovskiĭ, A. S. Optimality conditions in a smooth problem of optimal control in a Banach space. (Russian) **81f:90117**
Ubhaya, Vasant A. Nonlinear programming and an optimization problem on infinitely differentiable functions. **81d:90109**
Zimmermann, Uwe On some extremal optimization problems. (Czech summary) **81j:90134**

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Aubin, Jean-Pierre Further properties of Lagrange multipliers in nonsmooth optimization. **(81a:90129)**
Beer, Gerald The approximation of upper semicontinuous multifunctions by step multifunctions. **(81k:54012)**
Dolecki, Szymon Abstract study of optimality conditions. **(81c:90075)**
Egle, Kuno Dynamic optimization in compact spaces. **(81a:90151)**
Ha, Chung Wei Minimax and fixed point theorems. **(81i:47058)**
Hiriart-Urruty, Jean-Baptiste Mean value theorems in nonsmooth analysis. **(81i:58011)**
Kornstaedt, Hans-Joachim Necessary conditions of higher order for semi-infinite programming. **(81c:90079)**
Levin, V. L. (*with* Miljutin, A. A.) The problem of the displacement of masses with a discontinuous cost function and the mass formulation of the problem of the duality of convex extremal problems. (Russian) **(81g:49009)**
Maruyama, Toru Integration of correspondences and a variational problem with operator constraint. **(81i:46048)**
Miljutin, A. A. *See* **Levin, V. L., (81g:49009)**

Outrata, J. V. On the differentiability in dual optimal control problems. (Russian and German summaries) **(81g:90073)**

Pomerol, Jean-Charles Application de la programmation convexe à la programmation différentiable. (English summary) **(81g:90075)**

Rubio, J. E. Solution of nonlinear optimal control problems in Hilbert spaces by means of linear programming techniques. **(81f:49029)**

Saint-Pierre, Jean Points exposés d'une multiapplication à valeurs convexes de $\mathbb{R}^n$. (English summary) **(81j:90099)**

Studniarski, Marcin Application of the Dubovitskiĭ-Milyutin method to some locally convex extremal problems. (Polish summary) **(81f:49022a)**

Regularly locally convex functions on the Cartesian product of two spaces. (Polish summary) **(81f:49022b)**

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Zabrejko, P. P. (*with* Zafievskiĭ, A. V.) Conditions for the extremum of smooth functions. (Russian) **(81m:58014)**

Zafievskiĭ, A. V. *See* **Zabrejko, P. P., (81m:58014)**

90C50 Applications of mathematical programming

Armstrong, Ronald D. (*with* Kung, Mabel Tam) An algorithm for a least absolute value regression problem with bounds on the parameters. **81j:90135**

Banker, Rajiv D. A game-theoretic approach to measuring efficiency. **81i:90203**

Barauskas, Arunas (*with* Žilinskas, Antanas; Piljavskiĭ, Valeriĭ; Šul'man, V. S.; Juškene, Elena) Investigation of optimization problems in synthesis of pigment compositions. (Russian. Lithuanian and English summaries) **81j:90136**

Castellani, G. (*with* Giannessi, F.) Decomposition of mathematical programs by means of theorems of alternative for linear and nonlinear systems. **81k:90139**

Gale, David Optimization methods for solving nonoptimization problems. **81d:90110**

Giannessi, F. *See* **Castellani, G., 81k:90139**

Jahno, V. M. Class of linear dynamic timetable models. **81a:90156**

Juškene, Elena *See* **Barauskas, Arunas; et al., 81j:90136**

Kalošnikov, V. V. Some problems of lexicographic minimization. (Russian) **81e:90108**

Karpov, I. K. (*with* Laĭkevič, G. I.) Inverse physical chemistry problems as inverse problems of mathematical programming. (Russian) **81i:90204**

Kung, Mabel Tam *See* **Armstrong, Ronald D., 81j:90135**

Laĭkevič, G. I. *See* **Karpov, I. K., 81i:90204**

Lembersky, Mark R. The application of Markov decision processes to forest management. (*See* **80d:90002**)

Limaye, A. Linear programming over a set of restriction whose activity coefficients form an input-output matrix. **81d:90111**

Piljavskiĭ, Valeriĭ *See* **Barauskas, Arunas; et al., 81j:90136**

Silver, Edward A. (*with* Valqui Vidal, René Victor; de Werra, Dominique) A tutorial on heuristic methods. **81k:90109**

Šul'man, V. S. *See* **Barauskas, Arunas; et al., 81j:90136**

Valqui Vidal, René Victor *See* **Silver, Edward A.; et al., 81k:90109**

de Werra, Dominique *See* **Silver, Edward A.; et al., 81k:90109**

Žilinskas, Antanas *See* **Barauskas, Arunas; et al., 81j:90136**

secondary classifications:

Ahlswede, Rudolf (*with* Wegener, Ingo) ★Suchprobleme. (German) [Search problems] **(81d:94022)**

(Casti, John L.) *See* **Salukvadze, M. E., (81k:93001)**

Charalambous, Christakis Acceleration of the least pth algorithm for minimax optimization with engineering applications. **(81b:90130)**

Cigno, Alessandro Depletion of natural resources and accumulation of capital when population is endogenous. An activity analysis. **(81j:90036)**

Cuer, M. Application of linear programming to the inverse gravity or magnetic problem. Basic numerical techniques. **(81f:86004)**

Gaĭcgori, V. G. *See* **Pervozvanskiĭ, A. A., (81f:90104)**

Harnos, Zs. Divisors of polynomials with positive coefficients. **(81j:26014)**

Jahn, Johannes Zur Stabilität von Regressionskoeffizienten. **(81a:62059)**

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May, S. J. An application of Neustadt's abstract maximum principle to probability kinematics. **(81a:90127)**

Nanekata, Tsuneyuki (*with* Tabata, Yoshio; Nishida, Toshio) A sequential allocation problem with unknown probabilities of appearance. **(81a:90076)**

Nishida, Toshio *See* **Nanekata, Tsuneyuki; et al., (81a:90076)**

Pervozvanskiĭ, A. A. (*with* Gaĭcgori, V. G.) ★Декомпозиция, агрегирование и приближенная оптимизация. (Russian) [Decomposition, aggregation and approximate optimization] **(81f:90104)**

Picard, Jean-Claude (*with* Ratliff, H. Donald) A cut approach to the rectilinear distance facility location problem. **(81d:90040)**

Prékopa, András Stochastic programming models and their application. (Hungarian) **(81j:90092)**

Ratliff, H. Donald *See* **Picard, Jean-Claude, (81d:90040)**

Salukvadze, M. E. ★Vector-valued optimization problems in control theory. **(81k:93001)**

Schmit, Lucien A. *See* **Woo, T. H., (81k:73055)**

Sengupta, Jati K. Complementarity theorems in stochastic programming. **(81d:90103)**

Tabata, Yoshio *See* **Nanekata, Tsuneyuki; et al., (81a:90076)**

Telesnin, V. R. Optimization of transient distortions. (Russian) **(81k:49011)**

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Wegener, Ingo *See* **Ahlswede, Rudolf, (81d:94022)**

Weinberger, H. F. Genetic wave propagation, convex sets, and semi-infinite programming. **(81g:92021)**

Westendorf, Christian-Michael Reaktionssysteme und rekursive Klassifikation. **(81a:93006)**

Woo, T. H. (*with* Schmit, Lucien A.) Decomposition in optimal plastic design of structures. **(81k:73055)**

90C99 None of the above, but in this section

Červak, Ju. Ju. Search for a lexicographically maximal discretely defined point of a convex set. (Russian) **81b:90154**

Foley, James D. Optimum design of two-computer networks. (*See* **81i:68009**)

Ibaraki, Toshihide The number of additional variables required for the integer programming formulation. **81f:90118**

Jackson, Richard H. F. (*with* Mulvey, John M.) A critical review of comparisons of mathematical programming algorithms and software (1953–1977). **81i:90205**

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Ünlü, Fevzi On CCP with duple potent convolution. (*See* **81j:93006b**)

secondary classifications:

Abrham, Jaromír (*with* Buie, R. N.) Duality in continuous programming and optimal control. **(81k:93028)**

Buie, R. N. *See* **Abrham, Jaromír, (81k:93028)**

Dem'janov, V. F. (*with* Poljakova, L. N.) Conditions for a minimum of a quasidifferentiable function on a quasidifferentiabie set. (Russian) **(81j:90102)**

Doležal, Jaroslav On the sufficient optimality conditions for discrete systems. (*See* **81j:93007**)

Hwang, F. K. Maximum wealth trees. **(81m:05084)**

Lowen, Robert Convex fuzzy sets. **(81i:26010)**

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Poljakova, L. N. *See* **Dem'janov, V. F., (81j:90102)**

Pšeničnyĭ, B. N. *See* **Mahmudov, È. N., (81g:52007)**

Ščepakin, M. B. Geometric method of search for a common point of convex sets. **(81g:52014)**

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90Dxx Game theory [See also 49A45, 68D27.]

(Aĭkenazy, V. O.) *See* **Differential, noncooperative, cooperative and statistical games, 81m:90110**

Jones, A. J. ★Game theory: mathematical models of conflict. **81g:90095**

Morgenstern, Oskar *See* **von Neumann, John, 81b:90155**

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Differential, noncooperative, cooperative and statistical games ★Дифференциальные, бескоалиционные, кооперативные и статистические игры. (Russian) [Differential, noncooperative, cooperative and statistical games] **81m:90110**

Games ★Дифференциальные, бескоалиционные, кооперативные и статистические игры. (Russian) [Differential, noncooperative, cooperative and statistical games] **81m:90110**

secondary classifications:

(Brams, Steven J.) *See* **Applied game theory, (81c:90001)**

Gromenko, V. M. ★Теория игр и ее приложение к управлению. (Russian) [Game theory and its application to control] **(81h:90001)**

(Schotter, A.) *See* **Applied game theory, (81c:90001)**

(Schwödiauer, G.) *See* **Applied game theory, (81c:90001)**

Applied game theory ★Applied game theory. **(81c:90001)**

Conference:

Applied Game Theory ★Applied game theory. **(81c:90001)**

Game theory ★Applied game theory. **(81c:90001)**

Vienna ★Applied game theory. **(81c:90001)**

90D05 2-person games

Adachi, A. *See* **Kasai, Takumi; et al., 81c:90092**

Anbar, D. (*with* Kalai, Ehud) A one-shot bargaining problem. **81f:90120**

Bárány, Imre On a class of balancing games. **81a:90159**

Başar, Tamer (*with* Olsder, Geert Jan) Mixed Stackelberg strategies in continuous-kernel games. **81a:90160**

Bicknell-Johnson, Marjorie *See* **Hoggatt, Verner E., Jr.; et al., 81d:90112**

Böge, W. (*with* Eisele, Th.) On solutions of Bayesian games. **81a:90161**

Bramer, M. A. Correct and optimal strategies in game playing programs. **81k:90110**

Couwenbergh, H. A. M. Stochastic games with metric state space. **81i:90207**

Eisele, Th. *See* **Böge, W., 81a:90161**

Evans, Ronald J. Silverman's game on intervals. **81b:90156**

Fraenkel, A. S. (*with* Yesha, Y.) Complexity of problems in games, graphs and algebraic equations. **81c:90091**

Gabisoulja, V. E. (*with* Maĭsuradze, V. G.) A finite antagonistic game with constraints on mixed strategies. (Russian. Georgian and English summaries) **81k:90111**

Gale, David The game of Hex and the Brouwer fixed-point theorem. **81b:90157**

Hoggatt, Verner E., Jr. (*with* Bicknell-Johnson, Marjorie; Sarsfield, Richard) A generalization of Wythoff's game. **81d:90112**

Isaacson, Karen (*with* Millham, C. B.) On a class of Nash-solvable bimatrix games and some related Nash subsets. **81j:90137**

Iwata, Shigeki *See* **Kasai, Takumi; et al., 81c:90092**

Jenkyns, T. A. (*with* Mayberry, J. P.) The skeleton of an impartial game and the Nim-function of Moore's Nim_k. **81h:90140**
Kalai, Ehud *See* **Anbar, D., 81f:90120**
Kasai, Takumi (*with* Adachi, A.; Iwata, Shigeki) Classes of pebble games and complete problems. **81c:90092**
Kim, Jin Bai Erratum to: "On the game of Go" [Kyungpook Math. J. **18** (1978), no. 1, 125–134; MR **58** #15226]. **81a:90162**
Kondrat'ev, A. Ì. *See* **Romanenko, E. V., 81f:90122**
Kuo, Wang Yüeh O. A note on matrix games and dual systems of real homogeneous linear equations. **81e:90109**
Maisuradze, V. G. *See* **Gabisonija, V. E., 81k:90111**
Mayberry, J. P. *See* **Jenkyns, T. A., 81h:90140**
Millham, C. B. *See* **Isaacson, Karen, 81j:90137**
Olaru, Elefterie Eine Charakterisierung der den Matrixspielen zugeordneten Graphen. (Romanian and French summaries) **81g:90096**
Olsder, Geert Jan *See* **Başar, Tamer, 81a:90160**
Pearl, Judea Asymptotic properties of minimax trees and game-searching procedures. **81i:90208**
Rădulescu, Elena Liliana Une généralisation du modèle de la maximisation du gain pour les jeux aléatoires avec information complète. **81f:90121**
Reisch, Stefan Gobang ist PSPACE-vollständig. (English summary) **81e:90110**
Romanenko, E. V. (*with* Kondrat'ev, A. Ì.) Game-theoretic modeling of a chess game with standard representation of information. (Russian. English summary) **81f:90122**
Rosenthal, Robert W. Arbitration of two-party disputes under uncertainty. **81h:90158**
New equilibria for noncooperative two-person games. **81g:90097**
Sarsfield, Richard *See* **Hoggatt, Verner E., Jr.; et al., 81d:90112**
Sengupta, Jati K. Constrained games as complementary eigenvalue problems. **81c:90093**
Smadici, Constantin Equilibrium points for $2 \times n$ bimatrix games. **81e:90111**
On the equilibrium points for bimatrix games. (German and Russian summaries) **81e:90112**
Soós, Zsolt On a method for finding the equilibrium points of a bimatrix game. (Hungarian. English summary) **81j:90138**
Sorin, S. A note on the value of zero-sum sequential repeated games with incomplete information. **81a:90163**
Teraoka, Yoshinobu A two-person game of timing with random arrival time of the object. **81a:90164**
Tijs, S. H. ε-equilibrium points theorems for two-person games. **81b:90159**
(*with* Vrieze, O. J.) Perturbation theory for games in normal form and stochastic games. **81g:90098**
Tuck, E. O. Doubling strategies for backgammon-like games. **81g:90099**
Simulation of bearing off and doubling in backgammon. **81k:90112**
Úlehla, J. A complete analysis of von Neumann's Hackendot. **81e:90113**
Vrieze, O. J. *See* **Tijs, S. H., 81g:90098**
Yamazaki, Yôhei The theory of division games. (Japanese) **81b:90160**
Yesha, Y. *See* **Fraenkel, A. S., 81c:90091**

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Butnariu, Dan A fixed point theorem and its applications to fuzzy games. **(81a:54008)**
Chvátal, V. (*with* Erdős, Paul) Biased positional games. **(81a:05107)**
Csirmaz, L. On a combinatorial game with an application to Go-moku. **(81a:05013)**
Erdős, Paul *See* **Chvátal, V., (81a:05107)**
Frick, H. On an application of game theory to a problem of testing statistical hypothesis. **(81h:62043)**
Kukushkin, N. S. Stable compromises in bribing the arbiter. (Russian) **(81b:90193)**
Lichtenstein, David (*with* Sipser, Michael) GO is polynomial-space hard. **(81b:68052)**
Lisogor, L. R. The Banach-Mazur game. (Russian) **(81e:03038)**
Podinovskiĭ, V. V. The guaranteed result principle for particular preference relations. (Russian) **(81h:90008)**
Reif, John H. Universal games of incomplete information. **(81h:68043)**
Sipser, Michael *See* **Lichtenstein, David, (81b:68052)**

90D10 *n*-person games, noncooperative

Armbruster, W. (*with* Böge, W.) Bayesian game theory. **81a:90165**
Beltadze, G. N. A mixed extension of finite lexicographic noncooperative games. (Russian. Georgian and English summaries) **81k:90113**
Bjerring, Andrew K. The "tracing procedure" and a theory of rational interaction. **81h:90141**
Böge, W. *See* **Armbruster, W., 81a:90165**
Bubelis, V. On equilibria in finite games. **81g:90100**
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(*with* Mezencev, A. V.; Cvetkova, N. V.) Evasion in a differential game with integral constraints and nonconvex control sets. (Russian) **81i:90229**

Gutman, Shaul *See* **Shinar, J., 81d:90123**

Mezencev, A. V. *See* **Gusjatnikov, P. B., 81f:90140** *and* **Gusjatnikov, P. B.; et al., 81i:90229**

Nikol'skiĭ, M. S. *See* **Berzan, S. P., 81b:90187**

Ostapenko, V. V. Nonlinear differential games of evasion. **81i:90230**

Pachter, Meir (*with* Getz, Wayne M.) The geometry of the barrier in the "game of two cars". **81e:90122**

Pontrjagin, L. S. Optimization and differential games. (Hungarian) **81h:90151**

Pšeničnyĭ, B. N. (*with* Rappoport, Ì. S.) On solving a problem of simple pursuit of several control objects. (Russian) **81d:90122**

Pursiheimo, U. Conjugate duality in the optimization of the search for a target with generalized conditionally deterministic motion. **81m:90118**

Rappoport, Ì. S. On the solution of a problem of group pursuit in linear differential games. (Russian) **81e:90123**

A linear problem of group pursuit with various constraints on the control. (Russian) **81f:90142**

See also **Čikriĭ, A. A., 81b:90189**; **Pšeničnyĭ, B. N., 81d:90122** *and* **Group pursuit problem in linear differential n-person games, 81a:90003**

Rihsiev, B. B. *See* **Satimov, N., 81e:90124** *and* **Satimov, N., 81g:90111**

Samn, Sherwood *See* **Speyer, Jason L.; et al., 81m:90119**

Satimov, N. (*with* Rihsiev, B. B.) Quasilinear differential evasion games. (Russian) **81g:90111**

(*with* Rihsiev, B. B.) On the theory of differential evasion games with several pursuers. (Russian) **81e:90124**

Shinar, J. (*with* Gutman, Shaul) Three-dimensional optimal pursuit and evasion with bounded controls. **81d:90123**

Speyer, Jason L. (*with* Samn, Sherwood; Albanese, Richard) A stochastic differential game theory approach to human operators in adversary tracking encounters. **81m:90119**

Telgársky, Ratislav Topological games and measures. **81b:90191**

Ušakov, V. N. A minimax differential game of approach and evasion and local conditions for solvability of the problem of approach and evasion. (Russian) **81j:90150**

Vasil'ev, F. P. Methods of searching for optimum time in dynamic games of pursuit-evasion with programmed control. (Russian) **81a:90171**

Vostapenko, V. V. The evasion problem with integral and geometric constraints on control. (Russian. English summary) **81b:90190**

Group pursuit problem in linear differential n-person games ★Задача группового преследования в линейных дифференциальных играх многих лиц. (Russian) [The group pursuit problem in linear differential n-person games] **81a:90003**

Linear differential n-person games ★Задача группового преследования в линейных дифференциальных играх многих лиц. (Russian) [The group pursuit problem in linear differential n-person games] **81a:90003**

secondary classifications:

Bar-Itzhack, Itzhack Y. Novel method for data compression in recursive INS error estimation. **(81d:93044)**

Bar-Ness, Y. (*with* Feinstein, J.) Design of optimal tracking discrete control system. **(81k:93043)**

Brikman, M. S. Optimal control synthesis in linear determinate systems. **(81k:93019)**
Feinstein, J. *See* **Bar-Ness, Y., (81k:93043)**
Meirovitch, L. *See* **Öz, H., (81d:70023)**
Mjelde, K. M. A war of attrition and attack with decreasing rates of weapons supply. **(81f:90133)**
Ostapenko, V. V. The evasion problem with various constraints on the control. (Russian) **(81d:90120)**
A differential evasion game without discrimination of the opponent. (Russian. English summary) **(81d:90121)**
Öz, H. (*with* Meirovitch, L.) Optimal modal-space control of flexible gyroscopic systems. **(81d:70023)**
Washburn, A. R. On a search for a moving target. **(81f:90060)**

90D30 Utility theory [See also 90A10.]

Landau, Henry J. *See* **Rosenthal, Robert W., 81e:90125**
McClennen, Edward F. The minimax theory and expected utility reasoning. **81h:90152**
Nakamura, Kenjiro The vetoers in a simple game with ordinal preferences. **81f:90143**
Plasmans, Joseph E. J. (*with* de Zeeuw, Aart J.) Incentives to cooperate in linear quadratic difference games. **81d:90124**
Rosenthal, Robert W. (*with* Landau, Henry J.) A game-theoretic analysis of bargaining with reputations. **81e:90125**
Samuelson, William First-offer bargains. **81i:90231**
de Zeeuw, Aart J. *See* **Plasmans, Joseph E. J., 81d:90124**

secondary classifications:

Anbar, D. (*with* Kalai, Ehud) A one-shot bargaining problem. **(81f:90120)**
Armbruster, W. (*with* Böge, W.) Bayesian game theory. **(81a:90165)**
Böge, W. *See* **Armbruster, W., (81a:90165)**
Diale, Giulio Two combinatorial problems pertaining to the partitions of a finite set. (Italian. English summary) **(81j:05010)**
Gibbard, Allan (*with* Harper, William L.) Counterfactuals and two kinds of expected utility. **(81f:90017)**
Harper, William L. *See* **Gibbard, Allan, (81f:90017)**
Joó, István A simple proof for von Neumann's minimax theorem. **(81i:49006)**
Kalai, Ehud *See* **Anbar, D., (81f:90120)**
Monjardet, B. An axiomatic theory of tournament aggregation. **(81i:90017)**
Papadopoulos, Nicholas M. The garbling decision maker: a model of bounded rationality. **(81f:90007)**
Sakaguchi, Minoru Information value analysis for the logarithmic investor and gambler. **(81f:90013)**
Shenoy, Prakash P. On committee decision making: a game theoretical approach. **(81j:90146)**
Shubik, M. (*with* Van der Heyden, L.) Logrolling and budget allocation games. **(81h:90015)**
Sidžimovć, D. Equilibrium situations in mixed strategies for a two-seller one-buyer market with bounded strategies for the buyers. (Russian. Lithuanian and English summaries) **(81e:90028)**
Van der Heyden, L. *See* **Shubik, M., (81h:90015)**
Vatel', I. A. Core in n-person game with personal and social criteria. **(81h:90148)**
Walker, Mark A generalization of the maximum theorem. **(81i:90014)**

90D35 Decision theory [See also 62Cxx, 90A05, 90B50.]

Assad, Arjang (*with* Golden, Bruce L.; Yee, James) Scheduling players in team competitions. **81m:90120**
Bennett, Peter G. Bidders and dispenser: manipulative hypergames in a multinational context. **81g:90112**
Casalino, G. (*with* Davoli, F.; Zoppoli, R.) Optimal control of information structures. **81j:90151**
Davoli, F. *See* **Casalino, G.; et al., 81j:90151**
Dubey, Pradeep (*with* Shapley, Lloyd S.) Mathematical properties of the Banzhaf power index. **81b:90192**
Golden, Bruce L. *See* **Assad, Arjang; et al., 81m:90120**
Klawe, Maria M. Optimal strategies for a fair betting game. **81c:90109**
Kukushkin, N. S. Stable compromises in bribing the arbiter. (Russian) **81b:90193**
Kunik, E. G. Methods of determining the domain of compromises in problems of vector optimization. (Russian) **81d:90125**
Myerson, R. B. Conference structures and fair allocation rules. **81j:90152**
Palfrey, Thomas R. Multiple-object, discriminatory auctions with bidding constraints: a game-theoretic analysis. **81i:90234**
Saaty, Thomas L. Modeling unstructured decision problems: the theory of analytical hierarchies. **81j:90153**
Shapley, Lloyd S. *See* **Dubey, Pradeep, 81b:90192**
Wittman, Donald Power in electoral games. **81i:90232**
Yager, Ronald R. Building fuzzy decision models. **81j:90154**
Yee, James *See* **Assad, Arjang; et al., 81m:90120**
Zoppoli, R. *See* **Casalino, G.; et al., 81j:90151**

secondary classifications:

Aldrich, J. H. A model of the U.S. presidential primary campaign. **(81d:90009)**
Bartmann, D. R. (*with* Pope, J. A.) Ein Scoring-Modell bei mehrfacher Zielsetzung mit unsicheren oder fehlenden Daten und abhängigen Zielen. (English summary) **(81g:90015)**
Dockery, John T. The use of fuzzy sets in the analysis of military command. **(81f:90144)**
Dubois, Didier (*with* Prade, Henri M.) Decision-making under fuzziness. **(81f:90003)**
Federgruen, Awi Successive approximation methods in undiscounted stochastic games. **(81d:93058)**
Jefferson, T. R. (*with* Scott, C. H.) A duality theory for a class of nonzero sum economic games. **(81i:90213)**
Kai, Yû *See* **Kanō, Seigo, (81g:93102)**
Kanō, Seigo (*with* Kai, Yû) Information theoretical approaches in game theory. **(81g:93102)**
Kantor, P. (*with* Nelson, R. J.) Social decision making in the presence of complex goals, ethics and the environment. **(81c:90011)**
Kickert, Walter J. M. ★Fuzzy theories on decision-making. **(81f:90006)**
Landau, Henry J. *See* **Rosenthal, Robert W., (81e:90125)**
Maskin, Eric Decision-making under ignorance with implications for social choice. **(81g:90007)**
Mulat, I. È. Stable coalitions in monotonic games. **(81b:90170)**
Nelson, R. J. *See* **Kantor, P., (81c:90011)**
Nowakowska, Maria Psychological factors in decision making: new decision models. **(81f:90021)**
Pope, J. A. *See* **Bartmann, D. R., (81g:90015)**
Prade, Henri M. *See* **Dubois, Didier, (81f:90003)**
Rosenthal, Robert W. Arbitration of two-party disputes under uncertainty. **(81b:90158)**
(*with* Landau, Henry J.) A game-theoretic analysis of bargaining with reputations. **(81e:90125)**
Schotter, A. Voting weights as power proxies: some theoretical and empirical results. **(81e:90013)**
Scott, C. H. *See* **Jefferson, T. R., (81i:90213)**
(Thrall, Robert M.) *See* **Decision information, (81e:93001)**
(Tsokos, Chris P.) *See* **Decision information, (81e:93001)**
Vilkas, Eduardas An axiomatic definition of a generalized n-nucleolus. (Russian. Lithuanian and English summaries) **(81d:90114)**
Decision information ★Decision information. **(81e:93001)**

90D40 Game theory models [See also 65Cxx, 68Cxx, 68Jxx.]

Abakuks, Andris Conditions for evolutionarily stable strategies. **81g:90113**
Bell, Robert M. (*with* Cover, Thomas M.) Competitive optimality of logarithmic investment. **81g:90114**
Brito, Dagobert L. (*with* Intriligator, Michael D.) A game-theoretic approach to bureaucratic behavior. **81i:90233**
Cover, Thomas M. *See* **Bell, Robert M., 81g:90114**
Dockery, John T. The use of fuzzy sets in the analysis of military command. **81f:90144**
Glasser, D. (*with* Horn, F. J. M.; Meidan, Reuven) Properties of certain zero column-sum matrices with applications to the optimization of chemical reactors. **81b:90194**
Guesnerie, Roger (*with* Oddou, C.) On economic games which are not necessarily superadditive. **81a:90173**
Horn, F. J. M. *See* **Glasser, D.; et al., 81b:90194**
Intriligator, Michael D. *See* **Brito, Dagobert L., 81i:90233**
Kannai, Yakar (*with* Peleg, Bezalel) An approach to the problem of efficient distribution of the labor force. **81d:90126**
Korpelevič, G. M. Relaxation methods for the solution of matrix games. (Russian) **81d:90127**
Kurdjumov, G. L. Algorithm-theoretic approach to games. **81e:90126**
Lagunov, V. N. Hierarchy and games. (Russian) **81m:90121**
Litvak, B. G. (*with* Sadovskiĭ, A. L.) Some game models of expert procedures. (Russian) **81f:90145**
Meidan, Reuven *See* **Glasser, D.; et al., 81b:90194**
Oddou, C. *See* **Guesnerie, Roger, 81a:90173**
Peleg, Bezalel *See* **Kannai, Yakar, 81d:90126**
Reinhard, Jean-Marie Jeux de survie économique: un modèle semi-markovien. **81g:90115**
Richter, W. F. Shapley's value and fair solutions of location conflicts. **81d:90128**
Sadovskiĭ, A. L. *See* **Litvak, B. G., 81f:90145**
Wrather, C. (*with* Yu, P. L.) Advertising games in duopoly market expansion. **81a:90174**
Yu, P. L. *See* **Wrather, C., 81a:90174**

secondary classifications:

Aldrich, J. H. A model of the U.S. presidential primary campaign. **(81d:90009)**
Banker, Rajiv D. A game-theoretic approach to measuring efficiency. **(81i:90203)**
Burley, Henry Thomas Game theory and gaming in economics. **(81a:90025)**
Èrlih, A. I. *See* **Hačijan, L. G., (81b:90121)**
Hačijan, L. G. (*with* Èrlih, A. I.) Serial game processes of solution of convex programming problems. **(81b:90121)**
Hines, W. G. S. Strategy stability in complex populations. **(81i:92019)**
Hofbauer, Josef (*with* Schuster, P.; Sigmund, K.) A note on evolutionary stable strategies and game dynamics. **(81d:92015)**
Kalai, Ehud (*with* Postlewaite, Andrew; Roberts, John) Arbitration of exchange situations with public goods. **(81d:90026)**
Kondrat'ev, A. Ì. *See* **Romanenko, E. V., (81f:90122)**
Lake, M. A new campaign resource allocation model. **(81d:90012)**
Pearl, Judea Asymptotic properties of minimax trees and game-searching procedures. **(81i:90208)**
Postlewaite, Andrew *See* **Kalai, Ehud; et al., (81d:90026)**
Roberts, John *See* **Kalai, Ehud; et al., (81d:90026)**
Romanenko, E. V. (*with* Kondrat'ev, A. Ì.) Game-theoretic modeling of a chess game with standard representation of information. (Russian. English summary) **(81f:90122)**
Schuster, P. *See* **Hofbauer, Josef; et al., (81d:92015)**
Selten, Reinhard A note on evolutionarily stable strategies in asymmetric animal conflicts. **(81d:92016)**
Sigmund, K. *See* **Hofbauer, Josef; et al., (81d:92015)**
Sobel, Joel Fair allocations of a renewable resource. **(81c:90026)**
Starkermann, R. The functional equivalence and the ethical ambivalence of a lawyer

and a spy. **(81m:92060)**

Yamazaki, Yōhei The theory of division games. (Japanese) **(81b:90160)**

90D42 Positional and lattice games

Potapov, S. V. (*with* Šimel'fenig, O. V.) Search algorithms for guaranteeing strategies on the basis of the method of game factorization. (Russian) **81b:90195**

Rappoport, I. S. Sufficient condition for approach in a linear several-person differential game with different types of constraints on the controls. **81d:90129**

Šimel'fenig, O. V. *See* **Potapov, S. V., 81b:90195**

Tomskiĭ, G. V. Quasidynamical games. (Russian) **81c:90110**

Antagonistic games in Kalman dynamical systems. (Russian) **81c:90111**

secondary classifications:

Tuck, E. O. Doubling strategies for backgammon-like games. **(81g:90099)**

90D45 Applications of game theory

(Brams, Steven J.) *See* **Tiplitz, Charles, 81k:90120**

Bres, E. (*with* Charnes, A.; Cole Eckels, D.; Hitt, S.; Lyders, R.; Rousseau, J.; Russell, K. G.; Schoeman, M.) Costs and their assessment to users of a medical library: a game-theoretic method for allocating joint fixed costs. **81d:90130**

Charnes, A. *See* **Bres, E.; et al., 81d:90130**

Cole Eckels, D. *See* **Bres, E.; et al., 81d:90130**

(Davis, Morton D.) *See* **Tiplitz, Charles, 81k:90120**

Haigh, John (*with* Rose, Michael R.) Evolutionary game auctions. **81j:90155**

Hamada, K. A game-theoretic approach to international monetary confrontations. **81d:90131**

Heaney, J. P. Efficiency/equity analysis of environmental problems—a game theoretic perspective. **81d:90132**

Hines, W. G. S. Three characterizations of population strategy stability. **81f:90146**

Hitt, S. *See* **Bres, E.; et al., 81d:90130**

Hyatt, G. W. (*with* Smith, Stephen D.; Raghavan, T. E. S.) Game theory models of intermale combat in fiddler crabs (Genus *Uca*). **81d:90133**

Kondrat'ev, A. I. *See* **Stognii, A. O., 81e:90127**

Lyders, R. *See* **Bres, E.; et al., 81d:90130**

Nakayama, Mikio Nash equilibria and Pareto optimal income redistribution. **81k:90119**

Raghavan, T. E. S. *See* **Hyatt, G. W.; et al., 81d:90133**

Rose, Michael R. *See* **Haigh, John, 81j:90155**

Rousseau, J. *See* **Bres, E.; et al., 81d:90130**

Rubinstein, Ariel An optimal conviction policy for offenses that may have been committed by accident. **81d:90134**

Russell, K. G. *See* **Bres, E.; et al., 81d:90130**

Schoeman, M. *See* **Bres, E.; et al., 81d:90130**

Smith, Stephen D. *See* **Hyatt, G. W.; et al., 81d:90133**

Stognii, A. O. (*with* Kondrat'ev, A. I.) Strategic representation of knowledge in automated information systems. (Russian. English summary) **81e:90127**

Tapiero, Charles S. A generalization of the Nerlove-Arrow model to multi-firms advertising under uncertainty. **81a:90175**

Thompson, Gerald L. Computing the core of a market game. **81j:90156**

Tiplitz, Charles Comments on: "Optimal jury selection: a game-theoretic model for the exercise of peremptory challenges" [Oper. Res. **26** (1978), no. 6, 966–991; MR 80a:90161] by Steven J. Brams and Morton D. Davis. **81k:90120**

Weber, Robert James Subjectivity in the valuation of games. **81a:90176**

Young, H. P. Exploitable surplus in n-person games. **81d:90135**

secondary classifications:

Adel'son-Vel'skiĭ, G. M. (*with* Arlazarov, V. L.; Donskoĭ, M. V.) ★Программирование игр. (Russian) [Game programming] **(81b:68106)**

Ahlswede, Rudolf (*with* Wegener, Ingo) ★Suchprobleme. (German) [Search problems] **(81d:94022)**

Arlazarov, V. L. *See* **Adel'son-Vel'skiĭ, G. M.; et al., (81b:68106)**

Bennett, Peter G. Bidders and dispenser: manipulative hypergames in a multinational context. **(81g:90112)**

Bilnov, A. L. Game-theoretic semantics and backwards-looking operators. (Russian) **(81h:03058)**

Burley, Henry Thomas Game theory and gaming in economics. **(81a:90025)**

Donskoĭ, M. V. *See* **Adel'son-Vel'skiĭ, G. M.; et al., (81b:68106)**

Drăguşin, Constantin Min-max pour des critères multiples. (English summary) **(81f:90099)**

Friedman, J. W. On entry preventing behavior and limit price models of entry. **(81d:90033)**

Harary, Frank Some theorems about graphs from social sciences. **(81m:05118)**

Höpfinger, Eckhard Dynamic standard setting for carbon dioxide. **(81d:92020)**

Kapur, J. N. Population dynamics via games theory and modified Volterra equations. **(81g:92020)**

McKelvey, Richard D. (*with* Niemi, Richard G.) A multistage game representation of sophisticated voting for binary procedures. **(81b:90017a)**

(*with* Niemi, Richard G.) Erratum: "A multistage game representation of sophisticated voting for binary procedures". **(81b:90017b)**

Niemi, Richard G. *See* **McKelvey, Richard D., (81b:90017a)** *and* **McKelvey, Richard D., (81b:90017b)**

Richter, W. F. Shapley's value and fair solutions of location conflicts. **(81d:90128)**

Shenoy, Prakash P. A two-person non-zero-sum game model of the world oil market. **(81f:90037)**

A three-person cooperative game formulation of the world oil market. **(81f:90038)**

Townsend, Robert M. Intermediation with costly bilateral exchange. **(81b:90035)**

Wegener, Ingo *See* **Ahlswede, Rudolf, (81d:94022)**

Yager, Ronald R. Extending Nash's bargaining model to include importances for multiobjective decisionmaking. **(81j:90008)**

90D99 None of the above, but in this section

Cummings, Benjamin E. *See* **Hirschberg, Morton A., (See 80m:73002)**

Hines, W. G. S. (*with* Maynard Smith, J.) Games between relatives. **81a:90177**

Hirschberg, Morton A. (*with* Cummings, Benjamin E.) The use of similitude methods to reduce the size and cost of game computations. **(See 80m:73002)**

Maynard Smith, J. *See* **Hines, W. G. S., 81a:90177**

Pearl, Judea Asymptotic complexity of game-searching procedures. **(See 81k:68003)**

Pressacco, Flavio Balanced arbitration for homogeneous weighted majority games. (Italian. English summary) **81h:90153**

92–XX BIOLOGY AND BEHAVIORAL SCIENCES

92–01 Elementary exposition, textbooks

Aliev, Š. S. ★Методологические аспекты проблемы управления. (Russian) [Methodological aspects of the control problem] **81h:92001**

Kolesov, Ju. S. (*with* Švitra, Donatas) The role of time-delay in mathematical models of ecology. (Russian. Lithuanian and English summaries) **81b:92001**

Simon, Herbert A. The behavioral and social sciences. **81d:92001**

Švitra, Donatas *See* **Kolesov, Ju. S., 81b:92001**

secondary classifications:

Burghes, David N. (*with* Wood, Alastair D.) ★Mathematical models in the social, management and life sciences. **(81b:00009)**

Chiang, Chin Long ★An introduction to stochastic processes and their applications. **(81i:60001)**

Davis, Monte *See* **Woodcock, Alexander, (81c:58021)**

Kim, Ki Hang (*with* Roush, Fred W.) ★Mathematics for social scientists, **(81c:00003)**

Kirkby, Michael John, III *See* **Wilson, Alan Geoffrey, (81i:00003)**

(Luce, R. Duncan) *See* **Kim, Ki Hang; et al., (81c:00003)**

Roush, Fred W. *See* **Kim, Ki Hang, (81c:00003)**

Saunders, Peter Timothy ★An introduction to catastrophe theory. **(81h:58019)**

Simon, Herbert A. The uses of mathematics in the social sciences. **(81k:00013)**

Wilson, Alan Geoffrey (*with* Kirkby, Michael John, III) ★Mathematics for geographers and planners. **(81i:00003)**

Wood, Alastair D. *See* **Burghes, David N., (81b:00009)**

Woodcock, Alexander (*with* Davis, Monte) ★Catastrophe theory. **(81c:58021)**

Zeeman, E. C. Levels of structure in catastrophe theory illustrated by applications in the social and biological sciences. (Hungarian) **(81c:58022)**

92–02 Advanced exposition (research surveys, monographs, etc.)

(Kimura, Motoo) *See* **Ohta, Tomoko, 81k:92001**

Ohta, Tomoko ★Evolution and variation of multigene families. **81k:92001**

Rochat, Jean-Claude ★Mathématiques pour la gestion de l'environnement. (French) [Mathematics for the management of the environment] **81j:92001**

(de Werra, Dominique) *See* **Rochat, Jean-Claude, 81j:92001**

secondary classifications:

Casti, John L. ★Connectivity, complexity, and catastrophe in large-scale systems. **(81d:93007)**

Černous'ko, F. L. (*with* Kolmanovskiĭ, V. B.) ★Оптимальное управление при случайных возмущениях. (Russian) [Optimal control under random perturbations] **(81m:93002)**

Guckenheimer, John Comments on catastrophe and chaos. **(81c:58055)**

Howard, Louis N. Nonlinear oscillations. **(81d:34029)**

Kaiser, F. Nonlinear oscillations (limit cycles) in physical and biological systems. **(81m:34049)**

Kolmanovskiĭ, V. B. *See* **Černous'ko, F. L., (81m:93002)**

92–03 Historical (must also be assigned at least one classification number from Section 01)

secondary classifications:

Tribus, Myron Thirty years of information theory. **(81a:01028)**

92–04 Explicit machine computation and programs (not the theory of computation or programming)

secondary classifications:

Miller, Robert N. *See* **Rinzel, John, (81g:92012)**

Rinzel, John (*with* Miller, Robert N.) Numerical calculation of stable and unstable periodic solutions to the Hodgkin-Huxley equations. **(81g:92012)**

92–06 Proceedings, conferences, etc.

(Antomonov, Ju. G.) *See* **Neurobionics and mathematical modeling of living processes, 81j:92002**

(Bruni, Carlo) *See* **Systems theory in immunology, 81c:92001**

(Burton, T. A.) *See* **Modeling and differential equations in biology, 81i:92002**

(Doria, Gino) *See* **Systems theory in immunology, 81c:92001**

(Getz, Wayne M.) *See* **Mathematical modelling in biology and ecology, 81i:92001**
(Hoppensteadt, Frank C.) *See* **Nonlinear oscillations in biology, 81a:92002**
(Ivanov-Muromskiĭ, K. A.) *See* **Neurobionics and mathematical modeling of living processes, 81j:92002**
(Koch, Giorgio) *See* **Systems theory in immunology, 81c:92001**
(Rybak, Boris) *See* **Advanced technobiology, 81a:92001**
(Strom, Roberto) *See* **Systems theory in immunology, 81c:92001**
Advanced technobiology ★Advanced technobiology. **81a:92001**
Biology ★Nonlinear oscillations in biology. **81a:92002**
★Mathematical modelling in biology and ecology. **81i:92001**
Carbondale, Ill. ★Modeling and differential equations in biology. **81i:92002**
Conference:
Modeling and Differential Equations in Biology ★Modeling and differential equations in biology. **81i:92002**
Systems Theory in Immunology ★Systems theory in immunology. **81c:92001**
Differential equations in biology ★Modeling and differential equations in biology. **81i:92002**
Ecology ★Mathematical modelling in biology and ecology. **81i:92001**
Immunology ★Systems theory in immunology. **81c:92001**
Mathematical modelling ★Нейробионика и математическое моделирование жизненных процессов. (Russian) [Neurobionics and mathematical modeling of living processes] **81j:92002**
Mathematical modelling in biology and ecology ★Mathematical modelling in biology and ecology. **81i:92001**
Modeling and differential equations in biology ★Modeling and differential equations in biology. **81i:92002**
NATO Summer School:
Advanced Technobiology ★Advanced technobiology. **81a:92001**
Neurobionics and mathematical modeling of living processes ★Нейробионика и математическое моделирование жизненных процессов. (Russian) [Neurobionics and mathematical modeling of living processes] **81j:92002**
Nonlinear oscillations in biology ★Nonlinear oscillations in biology. **81a:92002**
Paris ★Advanced technobiology. **81a:92001**
Pretoria ★Mathematical modelling in biology and ecology. **81i:92001**
Rome ★Systems theory in immunology. **81c:92001**
Salt Lake City, Utah ★Nonlinear oscillations in biology. **81a:92002**
Summer Seminar:
Applied Mathematics ★Nonlinear oscillations in biology. **81a:92002**
Symposium:
Mathematical Modelling in Biology and Ecology ★Mathematical modelling in biology and ecology. **81i:92001**
Systems theory in immunology ★Systems theory in immunology. **81c:92001**
Technobiology ★Advanced technobiology. **81a:92001**

secondary classifications:

(Avula, Xavier J. R.) *See* **Proceedings: International Conference on Mathematical Modeling, (81i:90005)**
(Axelsson, Owe) *See* **Analytical and numerical approaches to asymptotic problems in analysis, (81m:65005)**
(Bakule, Lubomír) *See* **Symposium: Formator, Mathematical Methods for the Analysis of Large-Scale Systems, (81j:93007)**
(Beneš, Jiří) *See* **Symposium: Formator, Mathematical Methods for the Analysis of Large-Scale Systems, (81j:93007)**
(Benkö, Iosif) *See* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006a)** *and* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006b)**
(Frank, Léonid S.) *See* **Analytical and numerical approaches to asymptotic problems in analysis, (81m:65005)**
(Hanika, F. de P.) *See* **Progress in cybernetics and systems research, (81i:90006)**
(Iracki, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Kahn, P. M.) *See* **Computational probability, (81k:60005)**
(Malanowski, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Mohler, R. R.) *See* **Recent developments in variable structure systems, economics and biology, (81f:90002)**
(Pichler, Franz R.) *See* **Progress in cybernetics and systems research, (81i:90006)**
(Ruberti, A.) *See* **Recent developments in variable structure systems, economics and biology, (81f:90002)**
(Simionescu, Claudia Lidia) *See* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006a)** *and* **Proceedings: International Symposium on Applications of Mathematics in System Theory, (81j:93006b)**
(van der Sluis, A.) *See* **Analytical and numerical approaches to asymptotic problems in analysis, (81m:65005)**
(Sydow, Achim) *See* **Systems analysis and simulation, (81j:93009)**
(Walukiewicz, S.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
Analytical and numerical approaches to asymptotic problems in analysis ★Analytical and numerical approaches to asymptotic problems in analysis. **(81m:65005)**
Applications of mathematics in system theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Artificial intelligence ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**
Berlin ★Systems analysis and simulation, 1980. **(81j:93009)**
Bragov ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Computational probability ★Computational probability. **(81k:60005)**
Conference:
Actuarial Research, Computational Probability ★Computational probability. **(81k:60005)**
Analytical and Numerical Approaches to Asymptotic Problems in Analysis ★Analytical and numerical approaches to asymptotic problems in analysis. **(81m:65005)**
Mathematical Modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
Congress:
AFCET-IRIA ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**
Cybernetics ★Progress in cybernetics and systems research. Vol. VII. **(81i:90006)**
IFIP Conference:
Optimization Techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
Large-scale systems ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. **(81j:93007)**
Liblice ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. **(81j:93007)**
Mathematical modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
Nijmegen ★Analytical and numerical approaches to asymptotic problems in analysis. **(81m:65005)**
Optimization techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
Probability ★Computational probability. **(81k:60005)**
Proceedings:
International Conference on Mathematical Modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
International Symposium on Applications of Mathematics in System Theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Progress in cybernetics and systems research ★Progress in cybernetics and systems research. Vol. VII. **(81i:90006)**
Providence, R.I. ★Computational probability. **(81k:60005)**
Recent developments in variable structure systems, economics and biology ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
Recognition of shapes and artificial intelligence ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**
St. Louis, Mo. ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
Selected papers:
Mathematics ★Selected papers on mathematics. **(81i:68012)**
Seminar:
US-Italy, Recent Developments in Variable Structure Systems, Economics and Biology ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
Symposium:
Applications of Mathematics in System Theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Formator, Mathematical Methods for the Analysis of Large-Scale Systems ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. **(81j:93007)**
Systems Analysis and Simulation ★Systems analysis and simulation, 1980. **(81j:93009)**
System theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **(81j:93006a)**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **(81j:93006b)**
Systems ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
Systems analysis and simulation ★Systems analysis and simulation, 1980. **(81j:93009)**
Systems research ★Progress in cybernetics and systems research. Vol. VII. **(81i:90006)**
Taormina ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
Toulouse ★Reconnaissance des formes et intelligence artificielle. Tome I, II, III. (French) [Recognition of shapes and artificial intelligence. Vol. I, II, III] **(81j:68007)**
Warsaw ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**

92A05 General biology [See also 73–XX, 76–XX, in particular 73Pxx, 76Zxx.]

Balasubramanian, R. Simulation of biological oscillators involving large time delays. **81j:92003**
Beatty, Denis C. (*with* Prasad, Tribhuan) Modeling of cellular membrane characteristics using stochastic approximation techniques. **81j:92004**
Brannigan, M. (*with* Fabian, B. C.) A two-morphogen diffusion model for gastrulation. **81j:92005**
Brodan, Vladimír *See* **Petiček, Jiří; et al., 81m:92003**

Chase, Ivan D. Cooperative and noncooperative behavior in animals. **81j:92006**

Dibrov, B. F. (*with* Livšic, M. A.; Vol'kenšteĭn, M. V.) The effect of a time lag in the immune reaction. **81k:92002**

Erickson, Ralph O. Microfibrillar structure of growing plant cell walls. (*See* **81l:92001**)

Fabian, B. C. *See* **Brannigan, M., 81j:92005**

Fowler, T. B. Computation as a thermodynamic process applied to biological systems. (French summary) **81m:92001**

Frisman, E. Ja. *See* **Skaleckaja, E. I.; et al., 81f:92001**

Gates, Michael A. Pattern analysis in biology: a simple method for morphogenetically constrained systems. **81k:92003**

Greenberg, James (*with* Greene, Curtis; Hastings, Stuart) A combinatorial problem arising in the study of reaction-diffusion equations. **81c:92002**

Greene, Curtis *See* **Greenberg, James; et al., 81c:92002**

Hájek, Miloslav *See* **Petříček, Jiří; et al., 81m:92003**

Hastings, Stuart *See* **Greenberg, James; et al., 81c:92002**

Houston, Alasdair *See* **McNamara, John, 81h:92002**

Huet, B. Contribution à l'étude de l'isomorphisme dans les systèmes complexes, à partir des systèmes biologiques et des caractères extraits par Forrester. (English summary) **81k:92004**

Livšic, M. A. *See* **Dibrov, B. F.; et al., 81k:92002**

Lumsden, Charles J. *See* **Totafurno, John; et al., 81g:92001**

McNamara, John (*with* Houston, Alasdair) The application of statistical decision theory to animal behavior. **81h:92002**

Merker, Renate Beitrag zur Theorie stochastischer zellularer Systeme. **81m:92002**

Othmer, H. G. Applications of bifurcation theory in the analysis of spatial and temporal pattern formation. **81i:92003**

Peterson, Eric L. A limit cycle interpretation of a mosquito circadian oscillator. **81d:92002**

Petříček, Jiří (*with* Hájek, Miloslav; Brodan, Vladimír) Parameter estimation of models of biological systems. **81m:92003**

Prasad, Tribhuan Modeling in biosystems: some current trends. **81m:92004**
See also **Beatty, Denis C., 81j:92004**

Ricciardi, Luigi M. Diffusion processes and first passage problems in biomathematics. (Italian. English summary) **81a:92026**

Rosen, Robert Bifurcations and biological observables. **81b:92002**

Šapiro, A. P. *See* **Skaleckaja, E. I.; et al., 81f:92001**

Segel, Lee A. Mathematical models for cellular behavior. (*See* **80m:92005**)

Skaleckaja, E. I. (*with* Frisman, E. Ja.; Šapiro, A. P.) ★Дискретные модели динамики численности популяций и оптимизация промысла. (Russian) [Discrete models of the dynamics of population size and of optimization of industrial production] **81f:92001**

von Solms, S. H. Modelling the growth of simple biological organisms using formal language theory. **81j:92007**

Totafurno, John (*with* Lumsden, Charles J.; Trainor, Lynn E. H.) Structure and function in biological hierarchies: an Ising model approach. **81g:92001**

Trainor, Lynn E. H. *See* **Totafurno, John; et al., 81g:92001**

Vasil'ev, V. B. *See* **Vavilin, V. A., 81d:92003**

Vavilin, V. A. (*with* Vasil'ev, V. B.) ★Математическое моделирование процессов биологической очистки сточных вод активным илом. (Russian) [Mathematical modeling of processes of biological treatment of sewage by activated sludge] **81d:92003**

Vol'kenšteĭn, M. V. *See* **Dibrov, B. F.; et al., 81k:92002**

Biological growth ★Conference on Models of Biological Growth and Spread. **81e:92001**

Conference:
Models of Biological Growth and Spread ★Conference on Models of Biological Growth and Spread. **81e:92001**

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Asačenkov, A. L. (*with* Marčuk, G. I.) Mathematical model of a disease and some results of numerical experiments. **81k:92006**

Barnes, C. J. Interactions between particles of arbitrary shape. I. Uncharged particles. **81a:78021**

Bock, H. H. Mathematisch-statistische Modelle in der Clusteranalyse. **81i:62102**

Bose, A. (*with* Dawson, Donald A.) A class of measure-valued Markov processes. **81g:60079**

Churchill, Richard C. (*with* Selgrade, J. F.) On the Poincaré criterion for asymptotic stability. **81g:58031**

(Claus, Volker) *See* **Graph-grammars and their application to computer science and biology, 81a:68005**

Davis, Henry T. (*with* Feldstein, Michael L.) The generalized Pareto law as a model for progressively censored survival data. **81g:62163**

Dawson, Donald A. Critical behavior of the geostochastic logistic system. **81g:60078**
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Ehrenfeucht, Andrzej (*with* Rozenberg, Grzegorz) On the structure of polynomially bounded DOL systems. **81f:68090**

(Ehrig, Hartmut) *See* **Graph-grammars and their application to computer science and biology, 81a:68005**

Eisenfeld, Jerome (*with* Soni, B.) Linear algebraic computational procedures for system identification problems. **81m:92065**

Eremin, I. I. (*with* Mazurov, Vl. D.) ★Нестационарные процессы математического программирования. (Russian) [Nonstationary processes of mathematical programming] **81f:90111**

Feldstein, Michael L. *See* **Davis, Henry T., 81g:62163**

Findeisen, Peter Asymptotic properties of a certain class of Bush-Mosteller learning models. **81m:60093**

Godal, R. C. (*with* Goodman, T. J.) Fuzzy sets and Borel. **81k:94057**

Goodman, T. J. *See* **Godal, R. C., 81k:94057**

Guckenheimer, John A brief introduction to dynamical systems. **81i:58022**

(Gvišiani, D. M.) *See* **Systems research, 81j:00028**

Haigh, John (*with* Rose, Michael R.) Evolutionary game auctions. **81j:90155**

Haken, H. Synergetics and bifurcation theory. **81j:58061**

Hamaker, C. (*with* Smith, K. T.; Solmon, D. C.; Wagner, S. L.) The divergent beam X-ray transform. **81k:44003**

Hayashi, Yoshio Fluid-dynamical study of protoplasmic streaming in a plant cell. **81f:92012**
Theoretical study of motive force of protoplasmic streaming in a plant cell. **81f:92013**

Higdon, J. J. L. The generation of feeding currents by flagellar motions. **81g:76130**
The hydrodynamics of flagellar propulsion: helical waves. **81g:76131**

Huston, Ronald L. (*with* Passerello, Chris E.) Multibody structural dynamics including translation between the bodies. **81m:70007**

Jasowitz, M. F. Semiflat L-cluster methods. **81h:06002**

Kedem, Benjamin ★Binary time series. **81d:62096**

Kolář, Pavel *See* **Rešodʹko, L. V.; et al., (*See* 81j:93007)**

Kulikova, N. V. *See* **Rešodʹko, L. V.; et al., (*See* 81j:93007)**

Lanzara, G. F. Stress and morphogenesis in a complex social organization modeling the education system. **81m:92059**

Luminet, J. P. Relateurs arithmétiques stabilisés: imbrication des cycles et méthode de classification. (English summary) **81k:10036**

Magino, Kenjiro Stability of spatially homogeneous periodic solutions of reaction-diffusion equations. **81j:35062**

Marčuk, G. I. *See* **Asačenkov, A. L., 81k:92006**

Mazurov, Vl. D. *See* **Eremin, I. I., 81f:90111**

Mihram, G. Arthur A closer look at Thom's catastrophe theory. **81k:58015**

Moiseev, N. N. (*with* Svireževˇ, Ju. M.) Systems analysis of dynamic processes in the biosphere. Conceptual model of biosphere. (Russian) **81m:92053**

de Mottoni, Piero *See* **Rothe, F., 81f:35067**

(Murgolo, F. P.) *See* **Lanzara, G. F., 81m:92059**

Passerello, Chris E. *See* **Huston, Ronald L., 81m:70007**

Rešodʹko, L. V. (*with* Kolář, Pavel; Kulikova, N. V.) Biological systems of cellular organization and their automata models. (*See* **81j:93007**)

Rose, Michael R. *See* **Haigh, John, 81j:90155**

Rothe, F. (*with* de Mottoni, Piero) A simple system of reaction-diffusion equations describing morphogenesis: asymptotic behavior. **81f:35067**

Rozenberg, Grzegorz *See* **Ehrenfeucht, Andrzej, 81f:68090** *and* **Graph-grammars and their application to computer science and biology, 81a:68005**

Rybak, Boris Welcome address. **81g:00010**

(Sadovskiĭ, V. N.) *See* **Systems research, 81j:00028**

Sattinger, David H. Selection mechanisms in symmetry breaking phenomena. **81c:58030**

Schuh, Hans-Jürgen (*with* Tweedie, Richard L.) Parameter estimation using transform estimation in time-evolving models. **81d:62094**

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Soni, B. *See* **Eisenfeld, Jerome, 81m:92065**

Svireževˇ, Ju. M. *See* **Moiseev, N. N., 81m:92053**

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Bad Honnef ★Graph-grammars and their application to computer science and biology. **81a:68005**

Biology ★Graph-grammars and their application to computer science and biology. **81a:68005**

Computer science ★Graph-grammars and their application to computer science and biology. **81a:68005**

Graph-grammars and their application to computer science and biology
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Systems research ★Системные исследования. (Russian) [Systems research] **81j:00028**

Workshop:
Graph-Grammars and their Application to Computer Science and Biology
★Graph-grammars and their application to computer science and biology. **81a:68005**

92A07 Medical applications of biology

Albert, Arthur (*with* Freedman, Marvin; Perelson, Alan S.) Tumors and the immune system: the effects of a tumor growth modulator. **81k:92005**

Alekseevskaja, M. A. (*with* Sablin, V. M.; Pereverzev-Orlov, V. S.) Prediction of medical tactics. (Russian) (*See* **81f:92007**)

Antropov, V. I. (*with* Buharov, I. B.; Hanin, M. A.) Mathematical models of hemodynamic aspects of hypertension and ischemia. (Russian) (*See* **81f:92007**)

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Asačenkov, A. L. (*with* Marčuk, G. I.) Mathematical model of a disease and some results of numerical experiments. **81k:92006**
(*with* Belyh, L. N.) On mathematical modelling of a disease. **81m:92005**

Balanter, B. I. (*with* Lisin, V. V.) Application of a mathematical model of neurodynamics to the study of a class of pathological processes in the nervous system. (Russian) (*See* **81f:92007**)

Basson, David *See* **Yager, Ronald R., (*See* 81i:90005)**

Belyh, L. N. (*with* Marčuk, G. I.) Chronic forms of a disease and their treatment according to mathematical immune response models. **81k:92007**
See also **Asačenkov, A. L., 81m:92005**

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Die Berechnung pharmakokinetischer Parameter—ein Bericht aus der Praxis. (English summary) **81m:92006**

Belarov, I. B. *See* Antropov, V. I.; et al., (*See* **81f:92007**) *and* **Mathematical models of mechanisms of pathological processes, 81f:92007**

Černavskiĭ, D. S. *See* Stepanova, N. V., (*See* **81f:92007**)

Cherruault, Yves Identification des paramètres d'échanges dans les modèles compartimentaux. (English summary) **81d:92004**

Christensen, A. H. J. *See* Saffer, Sheila; et al., (*See* **81i:92001**)

Cocchi, Daniela A reliability model with finite domain and its application to the survival analysis of residual platelets. (Italian. English and French summaries) **81k:92008**

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Čuhovskiĭ, F. N. *See* Petrašen', P. V.; et al., **81m:92011**

Dehl, G. *See* Düchting, W., **81m:92007**

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Dupuy, M. (*with* Guillez, Arthur) Diffusion et osmose sélectives: application au problème de fonctionnement du néphron. (English summary) **81m:92008**

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Guillez, Arthur Étude analytique et conséquences physiologiques d'un modèle de la respiration. (English summary) **81m:92004**
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Jílek, Miloš (*with* Klein, Petr) Stochastic model of the immune response. **81j:92008**

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Kouradov, A. A. (*with* Levitin, E. I.; Maksimov, V. M.) Mathematical modeling of the processes of the development and optimal treatment of acute leukemia. (Russian) (*See* **81f:92007**)

Levitin, E. I. *See* Kouradov, A. A.; et al., (*See* **81f:92007**)

Lisin, V. V. *See* Balanter, B. I., (*See* **81f:92007**)

Maksimov, V. M. *See* Kouradov, A. A.; et al., (*See* **81f:92007**)

Marchand, J. *See* Stanley, J. C.; et al., **81j:92009**

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Nicolaescu, T. (*with* Cristea, Al.) Le foie normal et pathologique comme système: les hépatites aigues et chroniques. (*See* **81j:93006a**)

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Pathological processes ★Математические модели механизмов патологических процессов. (Russian) [Mathematical models of mechanisms of pathological processes] **81f:92007**

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Systems Theory in Immunology ★Systems theory in immunology. **(81c:92001)**

Immunology ★Systems theory in immunology. **(81c:92001)**

Rouse ★Systems theory in immunology. **(81c:92001)**

Systems theory in immunology ★Systems theory in immunology. **(81c:92001)**

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Souriau, P. *See* **Gumowski, Igor,** (*See* **81j:68009**)
Stallard, Eric *See* **Manton, Kenneth G., 81j:92012**
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Complex regulatory systems ★Kinetic logic: a Boolean approach to the analysis of complex regulatory systems. **81k:92046a**
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Special issue:
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Barber, Peter W. *See* **Massoudi, Habib; et al., (81d:78010)**
Betta, Jan On some dependence between observability and controllability. (Russian summary) **(81d:93010)**
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Reliability studies ★Synthesis and analysis methods for safety and reliability studies. **81j:93008**
Rocquencourt ★Analyse et contrôle de systèmes. (French) [Analysis and control of systems] **81m:93003**
San Diego, Calif. ★Proceedings of the 1978 IEEE Conference on Decision and Control including the 17th Symposium on Adaptive Processes. **81a:93001**
Simulation of distributed-parameter and large-scale systems ★Simulation of distributed-parameter and large-scale systems. **81c:93004**
Stability of motion ★Динамика управляемых систем. (Russian) [Dynamics of control systems] **81c:93003**
★Проблемы устойчивости движения, аналитической механики и управления движением. (Russian) [Problems of stability of motion, analytical mechanics and control of motion] **81e:93002**
Symposium:
Applications of Mathematics in System Theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **81j:93006a**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **81j:93006b**
Formator, Mathematical Methods for the Analysis of Large-Scale Systems ★Third Formator Symposium on Mathematical Methods for the Analysis of Large-Scale Systems. **81j:93007**
Systems Analysis and Simulation ★Systems analysis and simulation, 1980. **81j:93009**
Synthesis and analysis methods for safety and reliability studies ★Synthesis and analysis methods for safety and reliability studies. **81j:93008**
System theory ★Proceedings of the International Symposium on Applications of Mathematics in System Theory. I. **81j:93006a**
★Proceedings of the International Symposium on Applications of Mathematics in System Theory. II. **81j:93006b**
Systems ★Analyse et contrôle de systèmes. (French) [Analysis and control of systems] **81m:93003**
★Thirteenth Asilomar Conference on Circuits, Systems & Computers. **81m:93004**
Systems analysis ★Analyse des systèmes. (French) [Systems analysis] **81f:93002**
Systems analysis and simulation ★Systems analysis and simulation, 1980. **81j:93009**
Systems engineering ★Handbook of large scale systems engineering applications. **81d:93004**
Systems theory ★Асимптотические методы в теории систем. Вып. 9. (Russian) [Asymptotic methods in systems theory. No. 9] **81f:93001**
Theory of invariance and its application ★Теория инвариантности и ее применение. Часть 1. (Russian) [Theory of invariance and its application. Part 1] **81h:93001a**
★Теория инвариантности и ее применение. Часть 2. (Russian) [Theory of invariance and its application. Part 2] **81h:93001b**
Urbino ★Synthesis and analysis methods for safety and reliability studies. **81j:93008**
Workshop:
Information Linkage between Applied Mathematics and Industry ★Information linkage between applied mathematics and industry. II. **81j:93004**

secondary classifications:

(Archetti, Francesco) *See* **Numerical techniques for stochastic systems, (81f:93067)**
(Avula, Xavier J. R.) *See* **Proceedings: International Conference on Mathematical Modeling, (81i:90005)**
(Ballester, A.) *See* **Proceedings: World Conference on Mathematics at the Service of Man, (81m:90003a)** *and* **Proceedings: World Conference on Mathematics at the Service of Man, (81m:90003b)**
(Batle, N.) *See* **Proceedings: World Conference on Mathematics at the Service of Man, (81m:90003a)** *and* **Proceedings: World Conference on Mathematics at the Service of Man, (81m:90003b)**
(Birjukov, B. V.) *See* **Energetics approach to systems research, (81c:93005)**
(Cagiani, Marco) *See* **Numerical techniques for stochastic systems, (81f:93067)**
(Dekker, L.) *See* **Simulation of systems '79, (81j:68009)**
(Gihman, I. I.) *See* **Behavior of systems in random media, (81m:60001)**
(Hanška, F. de P.) *See* **Progress in cybernetics and systems research, (81i:90006)**
(Iracki, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Lazarević, Branislav) *See* **Global and large scale system models, (81a:93009)**

(Lin'kov, Ju. M.) *See* **Behavior of systems in random media, (81m:60001)**
(Malanowski, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Mohler, R. R.) *See* **Recent developments in variable structure systems, economics and biology, (81f:90002)**
(Pichler, Franz R.) *See* **Progress in cybernetics and systems research, (81i:90006)**
(Ruberti, A.) *See* **Recent developments in variable structure systems, economics and biology, (81f:90002)**
(Savastano, G.) *See* **Simulation of systems '79, (81j:68009)**
(Trillas Ruiz, Enrique) *See* **Proceedings: World Conference on Mathematics at the Service of Man, (81m:90003a)** *and* **Proceedings: World Conference on Mathematics at the Service of Man, (81m:90003b)**
(Unbehauen, H.) *See* **Methods and applications in adaptive control, (81k:93038)**
(Vassiteenkiste, G. C.) *See* **Simulation of systems '79, (81j:68009)**
(Venikov, V. A.) *See* **Energetics approach to systems research, (81c:93005)**
(Walukiewicz, S.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
Adaptive control ★Methods and applications in adaptive control. **(81k:93038)**
Barcelona ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. I. **(81m:90003a)**
★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. **(81m:90003b)**
Behavior of systems in random media ★Поведение систем в случайных средах. (Russian) [Behavior of systems in random media] **(81m:60001)**
Bochum ★Methods and applications in adaptive control. **(81k:93038)**
Conference:
Mathematical Modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
Mathematics at the Service of Man ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. I. **(81m:90003a)**
★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. **(81m:90003b)**
Numerical Techniques for Stochastic Systems ★Numerical techniques for stochastic systems. **(81f:93067)**
Congress:
IMACS, Simulation of Systems ★Simulation of systems '79. **(81j:68009)**
Cybernetics ★Progress in cybernetics and systems research. Vol. VII. **(81i:90006)**
Dubrovnik ★Global and large scale system models. **(81a:93009)**
Energetics approach to systems research ★Энергетический подход к исследованию систем. (Russian) [Energetics approach to systems research] **(81c:93005)**
Gargnano ★Numerical techniques for stochastic systems. **(81f:93067)**
Global and large scale system models ★Global and large scale system models. **(81a:93009)**
IFIP Conference:
Optimization Techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
Large scale system models ★Global and large scale system models. **(81a:93009)**
Mathematical modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
Methods and applications in adaptive control ★Methods and applications in adaptive control. **(81k:93038)**
Numerical techniques for stochastic systems ★Numerical techniques for stochastic systems. **(81f:93067)**
Optimization techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
Proceedings:
International Conference on Mathematical Modeling ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
World Conference on Mathematics at the Service of Man ★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. I. **(81m:90003a)**
★Proceedings of the First World Conference on Mathematics at the Service of Man. Vol. II. **(81m:90003b)**
Progress in cybernetics and systems research ★Progress in cybernetics and systems research. Vol. VII. **(81i:90006)**
Recent developments in variable structure systems, economics and biology ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
St. Louis, Mo. ★Proceedings of the First International Conference on Mathematical Modeling. Vol. I, II, III, IV, V. **(81i:90005)**
Seminar:
US-Italy, Recent Developments in Variable Structure Systems, Economics and Biology ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
Simulation of systems '79 ★Simulation of systems '79. **(81j:68009)**
Sorrento ★Simulation of systems '79. **(81j:68009)**
Stochastic systems ★Numerical techniques for stochastic systems. **(81f:93067)**
Summer Seminar:
Global and Large Scale System Models ★Global and large scale system models. **(81a:93009)**
Symposium:
Methods and Applications in Adaptive Control ★Methods and applications in adaptive control. **(81k:93038)**
System models ★Global and large scale system models. **(81a:93009)**
Systems ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
Systems research ★Энергетический подход к исследованию систем. (Russian) [Energetics approach to systems research] **(81c:93005)**
★Progress in cybernetics and systems research. Vol. VII. **(81i:90006)**
Taormina ★Recent developments in variable structure systems, economics and biology. **(81f:90002)**
Warsaw ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**

93Axx General

93A05 Axiomatic system theory

Constantinescu, P. (*with* Nicolau, Edmond; Nicorovici-Porumbaru, N. Al.) Systems, models, invariance. (*See* **81j:93006a**)
Gray, Malcolm R. (*with* Turnovsky, Stephen J.) Expectational consistency, informational lags, and the formulation of expectations in continuous time models. **81a:93002**
Nicolau, Edmond *See* **Constantinescu, P.; et al.,** (*See* **81j:93006a**)
Nicorovici-Porumbaru, N. Al. *See* **Constantinescu, P.; et al.,** (*See* **81j:93006a**)
Teodorescu, Nicolae Basic notions of a mathematical system theory. (*See* **81j:93006a**)
Turnovsky, Stephen J. *See* **Gray, Malcolm R., 81a:93002**

secondary classifications:

Hernández Castaños, Diego Bricio Towards a conventionalist-empiricist view of mathematical modeling. **(81j:00024)**
Jessel, Maurice Vers une théorie générale de la technologie. **(81d:93001)**
Ruuth, Sampo *See* **Ylinen, Raimo; et al., (81c:93035)**
Sinervo, Jyrki *See* **Ylinen, Raimo; et al., (81c:93035)**
Ylinen, Raimo (*with* Ruuth, Sampo; Sinervo, Jyrki) On set theoretical and algebraic systems theory for linear differential and difference systems. **(81c:93035)**

93A10 General systems

d'Alessandro, Paolo A topological space of systems and a dense subset. **81m:93006**
Arbib, Michael A. (*with* Manes, Ernest G.) Generalized Hankel matrices and system realization. **81m:93007**
Baĭdosov, V. A. Control in general dynamical systems. (Russian) **81i:93003**
(Birjukov, B. V.) *See* **Energetics approach to systems research, 81c:93005**
Čehovīĭ, Ju. M. *See* **Volosov, V. V.; et al., 81e:93005**
Czechowicz, Kazimierz (*with* Malave, Nelson) A complex of operations approach to the optimal control of the set of plants. **81d:93005**
Darbo, Gabriele An ordered local algebra that occurs in systems theory. (Italian) **81j:93010**
Dittrich, J. A dynamical topology for the space of states. **81a:93003**
Divakov, O. G. *See* **Matrosov, V. M.; et al., 81c:93011**
Ēlkin, V. I. (*with* Pavlovskiĭ, Ju. N.; Smirnov, T. G.) The method of complete systems in aggregation problems. (Russian) **81g:93002**
Frost, M. G. (*with* Storey, Colin) Transformations of strict system equivalence between polynomial system matrices over $\mathbf{R}[s,z]$. **81c:93006**
Gnedenkov, L. N. A method of decomposition of systems of constraints. (Russian) **81c:93007**
Hanganut, Marius On a structural classification of objects in system theory. **81c:93008**
Hill, David J. (*with* Moylan, Peter J.) Dissipative dynamical systems: basic input-output and state properties. **81d:93006**
Jacak, Witold (*with* Tchoń, Krzysztof) On two ways of state space constructing for general dynamical systems. (Russian summary) **81c:93009**
Juščenko, A. S. *See* **Popov, E. P.; et al., 81e:93003**
(Kailath, Thomas) *See* **Verghese, George, 81f:93009**
Klir, George J. Architecture of structure systems: a basis for the reconstructability analysis. **81c:93010**
Leskov, A. G. *See* **Popov, E. P.; et al., 81e:93003**
Locke, M. Some considerations about general dynamical systems. **81g:93003**
Malave, Nelson *See* **Czechowicz, Kazimierz, 81d:93005**
Manes, Ernest G. *See* **Arbib, Michael A., 81m:93007**
Matrosov, V. M. (*with* Vasil'ev, S. N.; Divakov, O. G.; Tjatjuškin, A. I.) On technology of modelling and optimization of complex systems. **81c:93011**
Medvedev, V. S. *See* **Popov, E. P.; et al., 81e:93003**
Montroll, Elliott W. (*with* Shuler, Kurt E.) Dynamics of technological evolution: random walk model for the research enterprise. **81a:93004**
Moylan, Peter J. *See* **Hill, David J., 81d:93006**
Ottendörfer, Wilhelm *See* **Pichler, Franz R., 81c:93012**
Pavlov, V. V. (*with* Voronin, A. N.) A generalized quality criterion for ergatic control systems. **81f:93003**
Pavlovskiĭ, Ju. N. *See* **Ēlkin, V. I.; et al., 81g:93002**
Pichler, Franz R. (*with* Ottendörfer, Wilhelm) Decomposition of general dynamical systems. (Russian summary) **81c:93012**
Popov, E. P. (*with* Medvedev, V. S.; Leskov, A. G.; Juščenko, A. S.) Semi-automatic and interactive control systems for manipulation robots. (Russian) **81e:93003**
Roberts, Fred S. Structure and stability in weighted digraph models. **81f:93004**
Rumčev, V. G. Control of manpower systems. (Russian summary) **81c:93013**
Sahal, Devendra A theory of evolution of technology. **81i:93004**
Shuler, Kurt E. *See* **Montroll, Elliott W., 81a:93004**
Smirnov, T. G. *See* **Ēlkin, V. I.; et al., 81g:93002**
Solodovnikov, V. V. Automation of the design of automatic and automated systems of control of technological processes. (Russian) **81a:93005**
Storey, Colin *See* **Frost, M. G., 81c:93006**
Straka, Günther State-space decomposition of general dynamical systems. (Russian summary) **81c:93014**
Tchoń, Krzysztof *See* **Jacak, Witold, 81c:93009**
Tjatjuškin, A. I. *See* **Matrosov, V. M.; et al., 81c:93011**
(Van Dooren, P.) *See* **Verghese, George, 81f:93009**
Vasil'ev, S. N. *See* **Matrosov, V. M.; et al., 81c:93011**
Veličenko, V. V. (*with* Volkova, I. I.) Mathematical modeling of the motion of complex mechanical systems by the method of controlled couplings. (Russian) **81e:93004**

(Venikov, V. A.) *See* **Energetics approach to systems research, 81c:93005**

Verghese, George Comments on: "Properties of the system matrix of a generalized state-space system" [Internat. J. Control **30** (1979), no. 2, 235–243; MR 80i:93006] by Verghese, P. Van Dooren and T. Kailath. **81f:93009**

Volkova, L. I. *See* **Veličenko, V. V., 81e:93004**

Volosov, V. V. (*with* Voronova, L. I.; Čehovīl, Ju. M.) Two classes of iterative algorithms for correction of systems of programmed control of motion. (Russian) **81e:93005**

Voronin, A. N. *See* **Pavlov, V. V., 81f:93003**

Voronova, L. I. *See* **Volosov, V. V.; et al., 81e:93005**

Wellstead, P. E. ★Introduction to physical system modelling. **81c:93015**

Westendorf, Christian-Michael Reaktionssysteme und rekursive Klassifikation. **81a:93006**

White, K. Preston, Jr. Technique fixation and the Routh-Hurwitz criterion. **81a:93007**

Willems, Jan C. Time reversibility in deterministic and stochastic dynamical systems. **81m:93008**

Energetics approach to systems research ★Энергетический подход к исследованию систем. (Russian) [Energetics approach to systems research] **81c:93005**

Systems research ★Энергетический подход к исследованию систем. (Russian) [Energetics approach to systems research] **81c:93005**

secondary classifications:

Bogoljubov, N. N., Jr. Generalized theorems in model system theory. **(81a:82010)**

Bondi, P. (*with* Fergola, P.; Gambardella, L.; Tenneriello, C.) Stability in guaranteed cost control problems of large-scale systems with uncertain unbounded parameters. **(81m:49044)**

Černous'ko, F. L. Optimal control of mechanical systems. (Russian) **(81e:49001)**

Coulbeck, B. Dynamic simulation of water distribution systems. **(81i:90071)**

Fergola, P. *See* **Bondi, P.; et al., (81m:49044)**

Gambardella, L. *See* **Bondi, P.; et al., (81m:49044)**

Gray, Malcolm R. (*with* Turnovsky, Stephen J.) Expectational consistency, informational lags, and the formulation of expectations in continuous time models. **(81a:93002)**

Haken, H. Synergetics and a new approach to bifurcation theory. **(81h:58046)**

Harazlivili, A. B. The axiom of choice in the general theory of systems. (Russian. Georgian and English summaries) **(81c:28001)**

Jumarie, Guy A subjectivistic calculus. **(81f:83004)**

Kalman, R. E. A system-theoretic critique of dynamic economic models. **(81b:90046)**

Kickert, Walter J. M. Towards an analysis of linguistic modelling. **(81d:68135)**

Kloeden, Peter E. General control systems. **(81f:49013)**

(Kogan, B. Ja.) *See* **Modeling languages and software for hybrid computer systems, (81c:68005)**

Langhaar, Henry L. ★Dimensional analysis and theory of models. **(81a:00023)**

Laurini, Robert Introduction au multipilotage urbain. (English summary) **(81c:90050)**

Leitmann, George (*with* Wan, Henry Y., Jr.) Performance improvement of uncertain macroeconomic systems. **(81c:90028)**

Mihailičenko, A. M. Statistical model of roots of a characteristic equation of dynamical systems. (Russian) **(81a:93111)**

Rosen, Robert Protein folding: a prototype for control of complex systems. **(81g:92013)**

Sann, Sherwood Ratios of off-diagonal *C*-Wishart. **(81c:62056)**

Sethi, Suresh P. Optimal pilfering policies for dynamic continuous thieves. **(81b:90097)**

Tenneriello, C. *See* **Bondi, P.; et al., (81m:49044)**

Turnovsky, Stephen J. *See* **Gray, Malcolm R., (81a:93002)**

(Varaiya, Pravin) *See* **Laurini, Robert, (81c:90050)**

Wan, Henry Y., Jr. *See* **Leitmann, George, (81c:90028)**

Hybrid computer systems ★Языки моделирования и программное обеспечение гибридных вычислительных систем. (Russian) [Modeling languages and software for hybrid computer systems] **(81c:68005)**

Modeling languages and software for hybrid computer systems ★Языки моделирования и программное обеспечение гибридных вычислительных систем. (Russian) [Modeling languages and software for hybrid computer systems] **(81c:68005)**

93A13 Hierarchical systems

Arkun, Yaman *See* **Morari, Manfred; et al., 81b:93002a**

Conkov, S. M. (*with* Korkinov, V. S.) Matrix representation of hierarchical structures and the transition from the matrix to a graph modelling the structure. (Bulgarian. Russian and English summaries) **81h:93002**

Horward, J. L. *See* **Van Cutsem, Th.; et al., 81f:93005**

Kalliauer, A. A computational method for hierarchical optimization of complex systems. **81a:93008**

Korkinov, V. S. *See* **Conkov, S. M., 81h:93002**

Krawczak, Maciej Design of regular hierarchical organizational structures. (Polish. Russian and English summaries) **81m:93009**

Morari, Manfred (*with* Arkun, Yaman; Stephanopoulos, George) Studies in the synthesis of control structures for chemical processes. I. Formulation of the problem. Process decomposition and the classification of the control tasks. Analysis of the optimizing control structures. **81b:93002a**

(*with* Stephanopoulos, George) Studies in the synthesis of control structures for chemical processes. II. Structural aspects and the synthesis of alternative feasible control schemes. **81b:93002b**

Negoiță, Constantin Virgil On fuzzy systems. **81e:93006**

Petru, Otlican On a functional hierarchy system. (*See* **81j:93006a**)

Ribbens-Pavella, M. *See* **Van Cutsem, Th.; et al., 81f:93005**

Stephanopoulos, George *See* **Morari, Manfred; et al., 81b:93002a** *and* **Morari, Manfred, 81b:93002b**

Stollov, Emil I. Interaction balance method with feedback using augmented Lagrangians. (Polish. Russian and English summaries) **81g:93004**

Torbasova, V. P. On the question of analysis of elementary algebraic two-level systems. (Russian) **81k:93003**

Uličný, Ján Basic tasks in decentralized control of complex systems. (*See* **81j:93007**)

Van Cutsem, Th. (*with* Horward, J. L.; Ribbens-Pavella, M.) Hierarchical state estimator: a new way for large power systems estimations. **81f:93005**

secondary classifications:

Bertrand, P. *See* **Siret, J.-M.; et al., (81m:93010)**

Kalliauer, A. Software design for algorithms of hierarchical optimization. (*See* **81j:49001b**)

Michalesco, G. *See* **Siret, J.-M.; et al., (81m:93010)**

Sastry, Shankar (*with* Varaiya, Pravin) Hierarchical stability and alert state steering control of interconnected power systems. **(81j:93047)**

Siret, J.-M. (*with* Michalesco, G.; Bertrand, P.) On the use of aggregation techniques. **(81m:93010)**

Suhorukov, G. A. Planning of production and development in hierarchical control systems. (Russian) **(81i:90101)**

Varaiya, Pravin *See* **Sastry, Shankar, (81j:93047)**

Vasil'ev, V. B. *See* **Vavilin, V. A., (81d:92003)**

Vavilin, V. A. (*with* Vasil'ev, V. B.) ★Математическое моделирование процессов биологической очистки сточных вод активным илом. (Russian) [Mathematical modeling of processes of biological treatment of sewage by activated sludge] **(81d:92003)**

Zazworsky, Raymond M. Controllability and observability of linear time-invariant compartmental models. **(81j:92018)**

Zverev, V. Ju. The principle of complexity in production-type hierarchical structures. (Russian) **(81e:90098)**

93A15 Large scale systems

Allemong, John J. *See* **Winkelman, James R.; et al., 81g:93008**

Bakule, Lubomír On decentralized large-scale dynamic system control. (*See* **81j:93007**)

Bertrand, P. *See* **Siret, J.-M.; et al., 81m:93010**

Bilal, A. Y. *See* **Darwish, M. G., 81g:93005**

Birta, Louis G. A quasiparallel method for the simulation of loosely coupled continuous subsystems. **81i:93005**

Bitsoris, Georges On the synthesis of control laws for large scale dynamical systems. **81f:93006**

Blatnik, Josef Two-level optimization of large scale systems by structure modification. (*See* **81j:93007**)

Boičuk, L. M. Methods for multilevel control of interacting static plants. **81f:93007**

Brdys, Mieczysław (*with* Ulanicki, Bogumił) On the completely decentralized control with local feedback in large scale systems. (Polish. Russian summary) **81h:93003**

Casti, John L. ★Connectivity, complexity, and catastrophe in large-scale systems. **81d:93007**

Chow, Joe H. *See* **Winkelman, James R.; et al., 81g:93008**

Darwish, M. G. (*with* Bilal, A. Y.) Large scale systems modeling, simulation and control: an overview. **81g:93005**

Davison, Edward J. (*with* Tripathi, Nand K.) The optimal decentralized control of a large power system: load and frequency control. **81e:93007**

Enright, Wayne On the efficient and reliable numerical solution of large linear systems of ODE's. **81b:93003**

Fujita, Shobei (*with* Tsuji, Kazuhiko; Fukao, Takeshi) Topological equivalence of state spaces in the interconnected power system in emergency control. **81f:93008a**

See also **Zaborszky, J.; et al., 81f:93008b**

Fukao, Takeshi *See* **Fujita, Shobei; et al., 81f:93008a** *and* **Zaborszky, J.; et al., 81f:93008b**

Gruver, W. A. (*with* Hedges, J. C.; Snyder, W. E.) Decentralized minimum-energy control and coordination of large scale linear systems. **81g:93006**

Hassan, Mohammed F. *See* **Singh, Madan G., 81e:93009**

Hedges, J. C. *See* **Gruver, W. A.; et al., 81g:93006**

Kokotović, Petar V. *See* **Winkelman, James R.; et al., 81g:93008**

(Lazarević, Branislav) *See* **Global and large scale system models, 81a:93009**

Michalesco, G. *See* **Siret, J.-M.; et al., 81m:93010**

Sezer, M. E. (*with* Šiljak, D. D.) Decentralized stabilization and structure of linear large-scale systems. (*See* **81m:93004**)

Šiljak, D. D. Overlapping decentralized control. **81e:93008**

See also **Sezer, M. E., (*See* 81m:93004)**

Singh, Madan G. (*with* Hassan, Mohammed F.) Synthesis of robust decentralised controllers for large scale systems. **81e:93009**

Siret, J.-M. (*with* Michalesco, G.; Bertrand, P.) On the use of aggregation techniques. **81m:93010**

Skelton, Robert E. Cost decomposition of linear systems with application to model reduction. **81k:93007**

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Pustyl'nikov, L. M. Integral equations of optimal moving control in distributed parameter systems. **81k:93031**

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Naudé, Gert A note on the duality of time-varying decomposable systems. **(81i:93009)**
O'Brien, R. E. Perturbation of controllable systems. **(81d:93013)**
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Pandolfi, Luciano Nonautonomous regulator problem in Hilbert spaces. **(81a:49004)**
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Warrior, J. (*with* Viswanadham, N.) Scattering theory and the discrete linear optimal control problem. **81f:93054**
Willems, J. L. Optimal state reconstruction algorithms for linear discrete-time systems. **81k:93046**

secondary classifications:

Anderson, Brian D. O. *See* **Moore, J. B., (81f:93063)**
Eid, Shawki Z. *See* **Mahmoud, Magdi S., (81f:93051)**
Fedorov, S. M. (*with* Šidlovskiĭ, V. I.) Synthesis of a multidimensional discrete control system from a standard model by matching state vectors. **(81b:93031)**
Frisman, E. Ja. *See* **Skaleckaja, E. I.; et al., (81f:92001)**
Gabasov, R. F. (*with* Kirillova, F. M.) On the theory of necessary conditions for optimality in discrete control systems. (Russian) **(81j:49010)**
Gaĭcgori, V. G. *See* **Pervozvanskiĭ, A. A., (81f:90104)**
Gani, J. Some problems of epidemic theory. **(81a:92011)**
Jasko, F. F. Bounded solutions of discrete systems with periodic coefficients. (Russian. English summary) **(81h:39002)**
Jeleniewski, Tadeusz (*with* Sibilski, Wojciech) Flow and structural problems in the technical design. (Polish and Russian summaries) **(81e:90042)**
Kirillova, F. M. *See* **Gabasov, R. F., (81j:49010)**
Mahmoud, Magdi S. (*with* Eid, Shawki Z.) Decomposition and coordination for feedback process control. **(81f:93051)**
Hierarchical control policies for macroeconomic systems stabilization. **(81i:90048)**
Malov, K. M. Isomorphism (similarity) invariants of discrete systems. (Russian) **(81j:12014)**
Moore, J. B. (*with* Anderson, Brian D. O.) Coping with singular transition matrices in estimation and control stability theory. **(81f:93063)**
Murthy, D. N. P. Controllability of a discrete-time bilinear system. **(81a:93019)**
Nagamine, H. (*with* Ohmatsu, Shigeru; Soeda, Takashi) The optimal filtering problem for a discrete-time distributed parameter system. **(81b:93073)**
Ohmatsu, Shigeru *See* **Nagamine, H.; et al., (81b:93073)**
Palm, G. On representation and approximation of nonlinear systems. II. Discrete time. **(81k:93027)**
Penev, G. D. Algorithms for the adaptive stabilization of a completely achievable linear discrete system. (Russian. English summary) **(81g:93094)**
Pervozvanskiĭ, A. A. (*with* Gaĭcgori, V. G.) ★Декомпозиция, агрегирование и приближенная оптимизация. (Russian) [Decomposition, aggregation and approximate optimization] **(81f:90104)**
Šapiro, A. P. *See* **Skaleckaja, E. I.; et al., (81f:92001)**
Sibilski, Wojciech *See* **Jeleniewski, Tadeusz, (81e:90042)**
Šidlovskiĭ, V. I. *See* **Fedorov, S. M., (81b:93031)**
Skaleckaja, E. I. (*with* Frisman, E. Ja.; Šapiro, A. P.) ★Дискретные модели динамики численности популяций и оптимизация промысла. (Russian) [Discrete models of the dynamics of population size and of optimization of industrial production] **(81f:92001)**
Soeda, Takashi *See* **Nagamine, H.; et al., (81b:93073)**
V"čovski, I. H. Time optimal control of linear discrete systems. (Bulgarian. Russian and English summaries) **(81h:93024)**

93C57 Sampled-data

Drozdenko, S. E. A sufficient condition for synthesis of control with a minimal sampled-data dynamic system under phase constraints. I, II. (Russian) **81b:93046**
Gustomesov, V. A. Relay sampled-data systems with constant disturbance. (Russian) **81m:93052**
McClamroch, N. Harris Control of a linear sampled-data system using round-robin output feedback. **81b:93047**
Sesekin, A. N. *See* **Zavališčin, S. T., 81c:93059a**
Zavališčin, S. T. (*with* Sesekin, A. N.) On the question of the synthesis of sampled-data control in a problem of optimization of dynamical systems with quadratic quality criterion. (Russian) **81c:93059a**

secondary classifications:

Ailamov, A. A. (*with* Sokolova, S. P.) Stability of an automatic control system realizing stabilization and the derivation of a technological object from a break-down state. (Russian) **(81e:93066)**
Sokolova, S. P. *See* **Ailamov, A. A., (81e:93066)**

93C60 Continuous-time

Thowsen, Arild Computer control for low-order time-delay systems. **81j:93039**

secondary classifications:

Laub, Alan J. A Schur method for solving algebraic Riccati equations. **(81a:93055)**

93C99 None of the above, but in this section

Andreev, Ju. N. Peculiarities of control problems to be solved in system design. **81a:93059**
Arimoto, Suguru *See* **Miyazaki, Fumio, 81k:93049**
(Bernhard, P.) *See* **Kaulgud, N. N.; et al., 81d:93047**
Chen, Wai Kai Topological evaluation of feedback matrices in multiple-loop feedback amplifiers. **81a:93060**
Deif, Assem *See* **El-Gindy, Hossam, 81f:93055**
(Di Benedetto, Mario) *See* **Jimenez, E., 81k:93047**
El-Gindy, Hossam (*with* Deif, Assem) An algorithm for analysing lumped-distributed systems. **81f:93055**
Gurman, V. I. (*with* Rasina, I. V.) Approximate synthesis of an optimal control on the basis of sufficient conditions for a strong relative minimum. (Russian) **81a:93061**
Horozov, O. A. *See* **Samollenko, Ju. I., 81a:93058b**
(Isidori, A.) *See* **Jimenez, E., 81k:93047**
Jimenez, E. Comments on: "Triangular canonical forms for bilinear systems" [IEEE Trans. Automat. Control **23** (1978), no. 5, 877–880; MR **58** #26255] by M. D. Di Benedetto and A. Isidori. **81k:93047**
Kailath, Thomas *See* **Van Dooren, P.; et al., 81c:93061**
Kaulgud, N. N. (*with* Sentis, Rémi) Feedback discrétisé pour un problème de contrôle en temps optimal. (English summary) **81d:93047**
Korobov, V. I. Solution of the synthesis problem using a control function. (Russian) **81c:93060**
Kouvaritakis, B. A. Theory and practice of the characteristic locus design method. **81a:93062**
Malinowski, Krzysztof (*with* Nowosad, Krzysztof; Strulak, Michał) Simplification of models of linear systems using the continued fractions method and the application of simplified models. (Polish. Russian and English summaries) **81a:93063**
Mamdani, E. H. (*with* Sembi, B. S.) Process control using fuzzy logic. **81k:93048**
Miyazaki, Fumio (*with* Arimoto, Suguru) A control theoretic study on dynamical biped locomotion. **81k:93049**
Nowosad, Krzysztof *See* **Malinowski, Krzysztof; et al., 81a:93063**
Paraskevopoulos, P. N. Exact model-matching of 2-D systems via state feedback. **81f:93056**
Petrov, N. N. Continuity of the Bellman function in degenerate cases. (Russian) **81a:93064**
Rasina, I. V. *See* **Gurman, V. I., 81a:93061**
Samollenko, Ju. I. (*with* Horozov, O. A.) Stability of spin waves in the case of a longitudinal deformation of a ferromagnetic crystal. (Russian) **81a:93058b**
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Sembi, B. S. *See* **Mamdani, E. H., 81k:93048**
Sentis, Rémi *See* **Kaulgud, N. N., 81d:93047**
Sesekin, A. N. Estimation of the order of singularity of singular solutions of a problem of optimization of dynamic systems with quadratic quality criterion. (Russian) **81c:93059b**
Smirnov, E. Ja. Control of the triaxial orientation of a solid body. (Russian) **81g:93076**
Strulak, Michał *See* **Malinowski, Krzysztof; et al., 81a:93063**
(Tkačenko, V. A.) *See* **Control of objects with distributed parameters, 81a:93058a**
Van Dooren, P. (*with* Verghese, George; Kailath, Thomas) Properties of the system

matrix of a generalized state-space system. **81c:93061**

Verghese, George *See* **Van Dooren, P.; et al., 81c:93061**

Control of objects with distributed parameters ★Управление объектами с распределенными параметрами. (Russian) [Control of objects with distributed parameters] **81a:93058a**

secondary classifications:

Barraud, A. Y. Produit étoile et fonction signe de matrice. Application à l'équation de Riccati dans le cas discret. (English summary) **(81i:15011)**

(Bernhard, P.) *See* **Barraud, A. Y., (81i:15011)**

Cloutier, J. R. *See* **Miele, A.; et al., (81k:49022)**

Ichikawa, K. *See* **Tamura, K.; et al., (81f:49010)**

Kamiya, M. *See* **Tamura, K.; et al., (81f:49010)**

Miele, A. (*with* Cloutier, J. R.; Mohanty, B. P.; Wu, A. K.) Sequential conjugate gradient-restoration algorithm for optimal control problems with nondifferential constraints. I, II. **(81k:49022)**

Mohanty, B. P. *See* **Miele, A.; et al., (81k:49022)**

Mohler, R. R. Bilinear control structures in immunology. **(81d:92005)**

Potapov, M. M. Approximation with respect to the functional of maximin problems with connected variables. (Russian) **(81e:65028)**

Schumacher, J. M. A complement on pole placement. **(81a:93020)**

Tamura, K. (*with* Ichikawa, K.; Kamiya, M.) An optimal control problem with design parameter variables. **(81f:49010)**

Wu, A. K. *See* **Miele, A.; et al., (81k:49022)**

93Dxx Stability

93D05 Ljapunov stability

Alkinov, M. K. Absolute stability of steady motions of control systems in the corner $(-k, 0)$. (Russian) **81a:93065**

Aisagaliev, S. A. Stabilization and quasioptimal control of a class of nonlinear automatic control systems. (Russian) **81f:93057**

Aksenov, G. S. (*with* Fomin, V. N.) Adaptive control synthesis by means of the degenerate Ljapunov function. (Russian. English summary) **81b:93048**

Araki, Mitsuhiko *See* **Saeki, Masami, 81h:93068**

Bernussou, J. (*with* Burgat, C.) On vector Lyapunov functions and stability of interconnected systems. **81k:93050**

(*with* Geromel, José Claudio) Interconnected systems and the robust control problem. (*See* **81j:93007**)

Bobylev, N. A. Ljapunov functions and global extremum problems. **81f:93058**

Bousmalis, Dhemetrios *See* **Thompson, Wiley E.; et al., 81m:93054**

Burgat, C. *See* **Bernussou, J., 81k:93050**

Byrne, P. C. *See* **O'Reilly, N., 81g:93079**

Dickinson, Bradley W. Analysis of the Lyapunov equation using generalized positive real matrices. **81m:93053**

Fomin, V. N. *See* **Aksenov, G. S., 81b:93048**

Fornasini, Ettore (*with* Marchesini, Giovanni) Stability analysis of 2-D systems. **81k:93051**

Geromel, José Claudio Sur un problème d'optimisation paramétrique de l'équation matricielle de Lyapunov. (English summary) **81e:93063**

See also **Bernussou, J., (*See* 81j:93007)**

Gutman, Shaul Correction to: "Uncertain dynamical systems—a Lyapunov min-max approach" [IEEE Trans. Automat. Control **24** (1979), no. 3, 437–443; MR 80c:93098]. **81d:93048**

Heinen, James A. Difference inequalities and comparison theorems for stability of discrete systems. **81a:93066**

Kasymov, E. K. Absolute exponential instability of nonlinear control systems. (Russian) **81a:93067**

Kobayashi, Seiji *See* **Ono, Osamu, 81d:93049**

Larimore, M. G. Hyperstability and adaptive filtering. (*See* **81m:93004**)

Longchamp, R. Controller design for bilinear systems. **81f:93059**

Mahalanabis, A. K. (*with* Singh, Ramanand) On decentralized feedback stabilization of large-scale interconnected systems. **81e:93064**

Marchesini, Giovanni *See* **Fornasini, Ettore, 81k:93051**

Miyagi, H. (*with* Taniguchi, Tsuneo) Application of the Lagrange-Charpit method to analyse the power system's stability. **81g:93077**

Moldabaev, S. M Optimal stabilization of nonlinear systems. (Russian) **81h:93066**

Moylan, Peter J. (*with* Vannelli, Antonio; Vidyasagar, Mathukumalli) On the stability and well-posedness of interconnected nonlinear dynamical systems. **81j:93040**

Narendra, Kumpati S. (*with* Valavani, Lena S.) A comparison of Lyapunov and hyperstability approaches to adaptive control of continuous systems. **81h:93067**

Ono, Osamu (*with* Kobayashi, Seiji) Stability of composite systems with structural connections. (Japanese. English summary) **81d:93049**

O'Reilly, N. (*with* Byrne, P. C.) Frequency-domain condition for the existence of a Lyapunov functional for the problem of Lurie. **81g:93079**

Popov, V. N. (*with* Rudnickiĭ, M. P.) Analysis of the stability "in the large" of a second-order nonlinear system using an approximation of the nonlinearity by a function of relay type. (Russian) **81g:93078**

Rudnickiĭ, M. P. *See* **Popov, V. N., 81g:93078**

Ryaciotaki-Boussalis, Helen *See* **Thompson, Wiley E.; et al., 81m:93054**

Saeki, Masami (*with* Araki, Mitsuhiko) A new estimate of the stability regions of large-scale systems. **81h:93068**

Sharma, T. N. (*with* Singh, Vimal) On the absolute stability of continuous-time nonlinear systems. **81a:93068**

Singh, Ramanand *See* **Mahalanabis, A. K., 81e:93064**

Singh, Vimal *See* **Sharma, T. N., 81a:93068**

Sinha, A. S. C. Lyapunov functions for a class of large-scale systems. **81g:93080**

Skar, Sherwin J. Synchronous solutions of power systems: existence, uniqueness and stability. **81k:93052**

Taniguchi, Tsuneo *See* **Miyagi, H., 81g:93077**

Thompson, Wiley E. (*with* Boussalis, Dhemetrios; Ryaciotaki-Boussalis, Helen) Vector Lyapunov functions for a class of decentralized systems. **81m:93054**

Valavani, Lena S. *See* **Narendra, Kumpati S., 81h:93067**

Vannelli, Antonio *See* **Moylan, Peter J.; et al., 81j:93040**

Vidyasagar, Mathukumalli *See* **Moylan, Peter J.; et al., 81j:93040**

Vjazovik, A. P. Use of a second-order equation of Ljapunov's type in a problem of control synthesis. (Russian) **81m:93055**

Zhao, Su Xia Absolute stability of direct control systems. (Chinese. English summary) **81a:93069**

Zubov, S. V. Stability of periodic modes of relay systems with hysteresis. (Russian) **81i:93024**

secondary classifications:

Abramenko, S. N. (*with* Balin, E. A.; Seĭsov, Ju. B.) Estimations of sets of attainability of controllable systems. (Russian. English and Turkmen summaries) **(81f:93015)**

Anderson, Brian D. O. *See* **Moore, J. B., (81f:93063)** *and* **Bitmead, Robert R., (81g:93122)**

Balin, E. A. *See* **Abramenko, S. N.; et al., (81f:93015)**

Bickart, T. A. (*with* Jury, E. I.) Real polynomials: a test for nonglobal nonnegativity and nonglobal positivity. **(81k:12023)**

Bitmead, Robert R. (*with* Anderson, Brian D. O.) Lyapunov techniques for the exponential stability of linear difference equations with random coefficients. **(81g:93122)**

Bonnemay, A. Extension des théorèmes linéaires de Lyapunov aux systèmes implicites algébro-différentiels et application à la prévision des erreurs de simulation. (English summary) **(81b:34043)**

Derese, I. (*with* Noldus, E.) Design of linear feedback laws for bilinear systems. **(81a:93071)**

(*with* Noldus, E.) Rejection of multiplicative disturbances. (French summary) **(81h:93022)**

Dib, K. A. Transformation of the discrete finite difference systems to the diagonal form. (Arabic summary) **(81b:39001)**

Fradkov, A. L. Speed-gradient scheme and its application in adaptive control problems. **(81b:93036)**

Gait, Jason Stability in the gaming equation. **(81g:90107)**

Habets, Patrick *See* **Rouche, Nicolas; et al., (81f:34055)**

Jury, E. I. *See* **Bickart, T. A., (81k:12023)**

Kreisselmeier, Gerhard Algebraic separation in realizing a linear state feedback control law by means of an adaptive observer. **(81a:93072)**

Laloy, Michel *See* **Rouche, Nicolas; et al., (81f:34055)**

Martinjuk, A. A. Development of the method of Ljapunov functions in the theory of stability of motion of complex systems. (Russian) **(81a:34044)**

The Čaplygin-Ljapunov comparison principle in nonlinear mechanics. (Russian. English and Serbo-Croatian summaries) **(81f:70020)**

(Melin, C.) *See* **Derese, I.; et al., (81h:93022)**

Moore, J. B. (*with* Anderson, Brian D. O.) Coping with singular transition matrices in estimation and control stability theory. **(81f:93063)**

Noldus, E. *See* **Derese, I., (81a:93071)** *and* **Derese, I., (81h:93022)**

Rouche, Nicolas (*with* Habets, Patrick; Laloy, Michel) ★Прямой метод Ляпунова в теории устойчивости. (Russian) [Stability theory by Ljapunov's direct method] **(81f:34055)**

(Rubanovskiĭ, V. N.) *See* **Rouche, Nicolas; et al., (81f:34055)**

(Rumjancev, V. V.) *See* **Rouche, Nicolas; et al., (81f:34055)**

Seĭsov, Ju. B. *See* **Abramenko, S. N.; et al., (81f:93015)**

(Sergoev, V. S.) *See* **Rouche, Nicolas; et al., (81f:34055)**

(Singh, Madan G.) *See* **Bonnemay, A., (81b:34043)**

(Stepanova, S. Ja.) *See* **Rouche, Nicolas; et al., (81f:34055)**

Szatkowski, Andrzej Contribution to the qualitative theory of nonlinear systems and networks. **(81m:94029)**

Tarasova, L. Z. Stability of the rotation of a heavy solid body of variable mass, having a cavity filled with a fluid, subject to reactive forces in a case of Lagrange type. (Russian) **(81h:70002)**

Tasso, H. (*with* Teichmann, Jiri) A stability theorem for systems with discrete parameters and arbitrary circulatory forces. (German summary) **(81f:70011)**

Teichmann, Jiri *See* **Tasso, H., (81f:70011)**

93D10 Popov-type stability of feedback systems

Atherton, D. P. *See* **Mees, A. I., 81k:93054**

Kuncevič, V. M. (*with* Lyčak, M. M.) Invariance and stability in nonlinear automatic control systems. (Russian) **81j:93041**

Lyčak, M. M. *See* **Kuncevič, V. M., 81j:93041**

Mees, A. I. (*with* Atherton, D. P.) The Popov criterion for multiple-loop feedback systems. **81k:93054**

93D15 Stabilization of systems by feedback

Aleksandrov, V. M. Quasioptimal control and stabilization at random perturbations. **81m:93056**

Antončik, V. S. Stabilization of steady-state systems with incomplete feedback. (Russian) **81k:93055**

Athans, Michael *See* **Safonov, Michael G., 81c:93063**

Ball, J. M. (*with* Slemrod, M.) Feedback stabilization of distributed semilinear control systems. **81a:93070**

Bulgakov, M. V. *See* **Kusov, I. F.; et al., 81j:93042**

Derese, I. (*with* Noldus, E.) Design of linear feedback laws for bilinear systems. **81a:93071**

Descusse, J. State feedback decoupling with stability of linear constant (A, B, C, D) quadruples. **81h:93069**

Desoer, Charles A. (*with* Wang, Yung Terng) On the generalized Nyquist stability criterion. **81e:93065**

Francis, Bruce A. On robustness of the stability of feedback systems. **81g:93081**

Hermes, Henry On a stabilizing feedback attitude control. **81m:93057**

On the synthesis of a stabilizing feedback control via Lie algebraic methods. **81h:93070**

Hüseyin, Özay *See* **Sezer, Mesut E., 81g:93082**

Ikeda, Masao (*with* Šiljak, D. D.) On decentrally stabilizable large-scale systems. **81d:93050**

Kreisselmeier, Gerhard Algebraic separation in realizing a linear state feedback control law by means of an adaptive observer. **81a:93072**

Kurman, K. J. Comments on: "Stabilizability, detectability, and spectrum assignment for linear autonomous systems with general time delays" [IEEE Trans. Automat. Control 23 (1978), no. 5, 887–890; MR 58 #26383] by A. W. Olbrot. **81d:93051**

Kusov, I. F. (*with* Bulgakov, M. V.; Samoĭlova, N. I.) Stabilization of dynamical systems with distributed parameters under incomplete information conditions. (Russian. Georgian and English summaries) **81j:93042**

Laub, Alan J. Robust stability of linear systems—some computational considerations. **81m:93059**

Longchamp, R. Stable feedback control of bilinear systems. **81a:93073**

Mahmoud, Magdi S. *See* **Younis, Mohamed I.; et al., 81g:93084**

Michel, Anthony N. *See* **Miller, Richard K., 81j:93043**

Miller, Richard K. (*with* Michel, Anthony N.) On the response of nonlinear multivariable interconnected feedback systems to periodic input signals. **81j:93043**

Noldus, E. *See* **Derese, I., 81a:93071**

Nwokah, Osita D. I. A note on the stability of multivariable systems. **81f:93060**

(Olbrot, Andrzej W.) *See* **Kurman, K. J., 81d:93051**

O'Reilly, John Two time-scale feedback stabilization of linear time-varying singularly perturbed systems. **81b:93049**

Dynamical feedback control for a class of singularly perturbed linear systems using a full-order observer. **81b:93050**

Pedrycz, Witold Stabilization of bilinear systems by a linear feedback control. **81d:93052**

Ryan, E. P. On the sensitivity of a time-optimal switching function. **81c:93062**

Safonov, Michael G. (*with* Athans, Michael) On stability theory. **81c:93063**

Samoĭlova, N. I. *See* **Kusov, I. F.; et al., 81j:93042**

Sezer, Mesut E. (*with* Hüseyin, Özay) On decentralized stabilization of interconnected systems. **81g:93082**

Šiljak, D. D. *See* **Ikeda, Masao, 81d:93050**

Slemrod, M. *See* **Ball, J. M., 81a:93070**

Stein, G. Robust stability of linear systems: engineering motivation. **81m:93058**

Tannenbaum, Allen Feedback stabilization of linear dynamical plants with uncertainty in the gain factor. **81f:93061**

Vidyasagar, Mathukumalli On the stabilization of nonlinear systems using state detection. **81g:93083**

Vogt, William G. *See* **Younis, Mohamed I.; et al., 81g:93084**

Wang, Yung Terng *See* **Desoer, Charles A., 81e:93065**

Younis, Mohamed I. (*with* Vogt, William G.; Mahmoud, Magdi S.) A computational procedure to stabilize nonlinear sampled-data systems. **81g:93084**

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Desoer, Charles A. (*with* Wang, Yung Terng) Foundations of feedback theory for nonlinear dynamical systems. **(81a:93038)**

Gibson, J. S. A note on stabilization of infinite-dimensional linear oscillators by compact linear feedback. **(81f:47040)**

Haas, Violet B. Positive definiteness of a quadratic functional. **(81a:49001)**

Halanay, Aristide (*with* Morozan, T.) Stabilization by linear feedback of linear discrete stochastic systems. **(81e:93091)**

Herbert, R. J. Structural sensitivity of feedback controls for second-order nonlinear systems. **(81a:93039)**

Kolomiĕc', V. G. Some methods for studying random oscillations. (Russian) **(81d:34047)**

Kono, Michio Eigenvalue assignment in linear periodic discrete-time systems. **(81e:93061)**

Levan, N. On some relationships between the LaSalle invariance principle and the Nagy-Foiaş canonical decomposition. **(81k:47054)**

Mahalanabis, A. K. (*with* Singh, Ramanand) On decentralized feedback stabilization of large-scale interconnected systems. **(81e:93064)**

Morozan, T. *See* **Halanay, Aristide, (81e:93091)**

Sandberg, I. W. A theorem concerning properties of an arms-race model. **(81e:90121)**

Singh, Ramanand *See* **Mahalanabis, A. K., (81e:93064)**

Wang, Yung Terng *See* **Desoer, Charles A., (81a:93038)**

93D20 Asymptotic stability

Ahmed, A. R. E. On the stability of two-dimensional discrete systems. **81f:93062**

Anderson, Brian D. O. *See* **Moore, J. B., 81f:93063**

Andreev, A. S. (*with* Šančenko, N. I.; Šul'gin, A. M.) Application of the averaging method and the method of Ljapunov functions in the investigation of the motion of some mechanical systems. (Russian) **81h:93071**

Antonova, N. A. (*with* Gelig, A. H.) Stability of systems with integral pulse-width modulation. **81b:93051**

Ašimov, A. A. (*with* Sokolova, S. P.) Stability of an automatic control system realizing stabilization and the derivation of a technological object from a break-down state. (Russian) **81e:93066**

Barabanov, N. E. (*with* Jakubovič, V. A.) Absolute stability of control systems with one hysteresis nonlinearity. **81e:93067**

Beaudoin, Y. (*with* Nerenberg, M. A. H.) Computer codes for computational assistance in the study of asymptotic stability. **81k:93056**

Brayton, Robert K. (*with* Tong, C. H.) Constructive stability and asymptotic stability of dynamical systems. **81j:93044**

Celigorov, N. A. *See* **Serkov, V. I., 81m:93063**

Cook, P. A. Stability of systems containing slope-restricted nonlinearities. **81j:93045**

Dinovski, V. I. Stabilization of a class of linear control systems. (Bulgarian. Russian and English summaries) **81h:93072**

Fornasini, Ettore (*with* Marchesini, Giovanni) Stability problems in 2-D systems. **81k:93057**

Gelig, A. H. *See* **Antonova, N. A., 81b:93051**

Grujić, Ljubomir T. Sets and singularly perturbed systems. **81d:93053**

Halanay, Aristide (*with* Răsvan, Vladimir) Stabilization of a class of bilinear control systems with applications to steam turbine regulation. **81h:93073**

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Virani, N. A. A. (*with* Sargent, R. W. H.) A new approach to the theory of nonlinear stochastic systems. **(*See* 81j:93069)**

Wenk, Carl J. (*with* Bar-Shalom, Yaakov) A multiple model adaptive dual control algorithm for stochastic systems with unknown parameters. **81h:93096**

Wenzelburger, Heinz How to use the minimal cuts of fault tree analysis in Markov modelling. **(*See* 81j:93008)**

Willems, Jan C. Some remarks on the concept of information state. **81m:93067**

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Gargnano ★Numerical techniques for stochastic systems. **81f:93067**

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Stochastic systems ★Numerical techniques for stochastic systems. **81f:93067**

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Ahmadi, G. (*with* Morshedi, A. M.) Optimization of noisy functionals. **(81h:49021)**

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Anulova, S. V. Control of a Wiener process in a half-plane with an oblique reflection on the boundary. (Russian. English summary) **(81i:60073)**

Bogachenko, A. V. Some aspects of the variational theory of evolutionary stochastic boundary value problems. (Russian. English summary) **(81h:49009)**

Butkovskiĭ, A. G. (*with* Samoĭlenko, Ju. I.) Control of quantum systems. **(81k:93039a)**

(*with* Samoĭlenko, Ju. I.) Control of quantum systems. II. **(81k:93039b)**

Capasso, Vincenzo (*with* Paveri-Fontana, Stefano L.) Contributions to stochastic compartmental analysis. (Italian summary) **(81f:92008)**

Černous'ko, F. L. (*with* Kolmanovskiĭ, V. B.) ★Оптимальное управление при случайных возмущениях. (Russian) [Optimal control under random perturbations] **(81m:93002)**

Cikailo, T.-N. M. Random oscillations in essentially nonlinear nonautonomous stochastic systems. (Russian) **(81h:60079)**

Cocan, Moise On a problem of information theory. (Romanian. German summary) **(81c:94025)**

Curtain, Ruth F. Mathematical models for random vibration problems. **(81m:70032)**
Fabrikantova, E. F. Determination of mean information-entropy characteristics of a complex system with static interaction of its subsystems. (Russian. English and German summaries) **(81h:94012)**
Genis, Ja. G. Stochastic system behavior described by semirenewal process. **(81f:90112)**
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Indjehagopian, J.-P. Les processus stochastiques vectoriels ARMA: une procédure d'identification. **(81c:62102)**
Johnson, Don H. Applicability of white-noise nonlinear system analysis to the peripheral auditory system. **(81g:76088)**
Katyšev, P. K. A problem on the control of a random process that arises in information theory. (Russian) **(81d:94009)**
Kohlmann, Michael (*with* Rishel, Raymond) A variational inequality for a partially observed stopping time problem. **(81e:60046)**
Kolmanovskiĭ, V. B. *See* **Černous'ko, F. L., (81m:93002)**
Krasovskiĭ, N. N. Probabilistic control with a guaranteed result. (Russian. English summary) **(81f:93068)**
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Melamed, Benjamin Deterministic system theory applied to simplifications of stochastic systems. **(81c:68079b)**
Merker, Renate Beitrag zur Theorie stochastischer zellularer Systeme. **(81m:92002)**
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Moskatov, G. K. Problems of the reliability of adaptive automatic control systems. (Russian. English summary) **(81h:93049)**
Müller, P. C. (*with* Popp, K.) Kovarianzanalyse von linearen Zufallsschwingungen mit zeitlich verschobenen Erregerprozessen. **(81c:70020)**
Nikiforov, I. V. Cumulative sums for detection of changes in random process characteristics. **(81b:62105)**
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Pyt'ev, Ju. P. Problems of image restoration. (Russian) **(81a:94029)**
Railman, N. S. (*with* Varlaky, P.) On subjective dispersion functions. **(81a:60006)**
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Saksonov, M. T. A class of problems for the control of stochastic differential equations. (Russian. Tajiki summary) **(81c:49015)**
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Slobodčikova, L. V. Estimation of expansion coefficients of a stationary random field on the basis of a system of Haar functions. **(81a:62098)**
Tai, M. L. Stochastic models of self-assembly of linear chains. **(81i:92009)**
Tran Van Nhung Liapunov's exponent of a stochastic process and the stability of the system of linear differential equations with random matrixes. **(81c:60071)**
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Barron, Emmanuel Nicholas Finite energy approximations in stochastic and deterministic differential games. **(81f:90129)**
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Rădulescu, Elena Liliana Une généralisation du modèle de la maximisation du gain pour les jeux aléatoires avec information complète. **(81f:90121)**
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Baram, Yoram On the linearly constrained minimum mean square error estimate. **81g:93104**
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Lainiotis, D. G. Partitioning: the multimodel framework for estimation and control. I. Estimation. **81c:93077**

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Liu, Chang Huan (*with* Marcus, Steven I.) Estimator performance for a class of nonlinear estimation problems. **81a:93090**

Ljung, Lennart (*with* Caines, Peter E.) Asymptotic normality of prediction error estimators for approximate system models. **81h:93101**

Fast algorithms for recursive estimation and identification. **81h:93102**

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Morari, Manfred (*with* Stephanopoulos, George) Studies in the synthesis of control structures for chemical processes. III. Optimal selection of secondary measurements within the framework of state estimation in the presence of persistent unknown disturbances. **81b:93002c**

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Nakonečnīĭ, O. G. (*with* Navrods'kiĭ, V. O.) On minimax estimates of states of linear stochastic systems. (Russian. English summary) **81h:93103**

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Ohmatsu, Shigeru (*with* Kikuchi, Akira; Soeda, Takashi) The optimal smoothing estimators based on the Wiener-Hopf theory. **81c:93078**

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Ohnishi, Katsumi Direct recursive estimation of noise statistics. (*See* **81j:93002**)

Pankov, A. R. (*with* Skuridin, A. M.) Recursive estimation of linear model parameters from several groups of measurements. **81a:93091**

Panuska, V. A new form of the extended Kalman filter for parameter estimation in linear systems with correlated noise. **81a:93092**

Paulauskas, Celestinas A recurrent algorithm of general form for random input signal reconstruction in dynamic systems. (Russian. Lithuanian and English summaries) **81m:93071**

Poljak, B. T. (*with* Cypkin, Ja. Z.) Adaptive estimation algorithms (convergence, optimality, stability). **81c:93080**

Poznjak, A. S. Convergence of stochastic approximation algorithms in parameter identification of dynamic plants. **81a:93093**

Prager, D. L. (*with* Wellstead, P. E.) Interactive maximum likelihood estimation. **81k:93066**

Pranevičius, Henrikas (*with* Rimidis, Al'fredas) Application of the Bayesian approach in statistical estimation of the results of modeling non-steady-state systems. (Russian. Lithuanian and English summaries) **81h:93104**

Pugačev, V. S. Estimation of variables and parameters in discrete-time nonlinear systems. **81c:93081**

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Sebald, A. V. (*with* Haddad, A. H.) On the performance of combined detection estimation in convex uncertainty spaces. **81a:93094**

Silujanova, I. D. Estimation of variables and parameters in stochastic systems described by differential equations in a singular case. (Russian) **81b:93070**

Sims, Craig S. (*with* D'Mello, M. R.) Adaptive deconvolution of seismic signals. **81g:93107**

Sin, Kwai Sang (*with* Goodwin, Graham C.; Bitmead, Robert R.) An adaptive *d*-step ahead predictor based on least squares. **81m:93072**

Singh, Madan G. (*with* Titli, André) Large scale stochastic systems: identification, estimation and control. **81i:93031**

Šipienytė, D. Recurrence algorithms of statistical criterion for nonstationary detection of system with correlated noise. (Russian. Lithuanian and Russian summaries) **81k:93067**

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Upadhyaya, B. R. (*with* Sorenson, H. W.) Bayesian discriminant approach to input signal selection in parameter estimation problems. **81c:93082**

Verghese, George (*with* Friedlander, Benjamin; Kailath, Thomas) Scattering theory and linear least-squares estimation. III. The estimates. **81j:93058**

Vieira, A. *See* **Kailath, Thomas; et al., 81b:93069**

Wahba, Grace Practical techniques of optimal smoothing, with application to the numerical differentiation of noisy data and smoothing of log spectral density estimates. **81h:93105**

Washburn, H. D. (*with* Mendel, J. M.) Minimum-variance state estimation for uniform causal functional equations. **81e:93081**

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Wernersson, Åke Some state estimation problems connected with discrete time Markov chains. **81m:93073**

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Zarrop, Martin B. A Chebyshev system approach to optimal input design. **81b:93071**

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Akaike, Hirotugu A Bayesian extension of the minimum AIC procedure of autoregressive model fitting. **(81f:62136)**

Anan'ev, B. I. (*with* Pišculina, I. Ja.) Minimax quadratic filtering for systems with time lag. (Russian) **(81k:34082)**

Bensoussan, A. (*with* Chow, P. L.; Lions, Jacques-Louis) Filtering theory for stochastic processes with two-dimensional time parameter. **(81h:93108)**

Cavassilas, Jean-François Contribution à l'étude d'une estimateur de puissance pour une classe importante de processus stochastiques non stationnaires. (English summary) **(81b:94009)**

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Iljunin, O. K. Estimate of the effectiveness of an expert quantitative estimation procedure, employing a dichotomy. (Russian) **(81j:92057)**

Junkins, John L. ★An introduction to optimal estimation of dynamical systems. **(81j:93001)**

Kacura, A. V. Unity of approaches in the study of systems. (Russian) **(81e:00016)**

Katkovnik, V. Ja. (*with* Heĭsin, V. E.) Dynamic stochastic approximation of polynomial drifts. **(81a:62086)**

Kiehm, Jean-Luc (*with* Mélard, Guy) Approximation d'ordre 2 dans les modèles MA(1) dont le coefficient est une fonction exponentielle du temps. **(81m:62171)**

Körezlioğlu, Hayri (*with* Mazziotto, Gérald; Szpirglas, Jacques) Équations du filtrage non linéaire pour des processus à deux indices. (English summary) **(81g:60043)**

Kovanic, Pavel Classification of linear estimators. **(81m:94003)**

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Matzeu, Michele (*with* Vivaldi, Maria Agostina) A dual estimate for the Hamilton-Jacobi function of a continuous and impulsive stochastic control problem. (Italian summary) **(81i:49004)**

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Chikte, Shirish D (*with* Lo, James Ting Ho) Optimal filters for bilinear systems with nilpotent Lie algebras. **(81m:93074)**

Deuflhard, P. (*with* Apostolescu, V.) A study of the Gauss-Newton algorithm for the solution of nonlinear least squares problems. **(81m:65100)**

Helsin, V. E. *See* **Katkovnik, V. Ja., (81k:49021)**

Ichikawa, Akira (*with* Ryan, E. P.) Sensor and controller location problems for distributed parameter systems. **(81m:93066)**

Katkovnik, V. Ja. (*with* Helsin, V. E.) Universal residual function for solving conditional extremum problems. (Russian) **(81k:49021)**

Lo, James Ting Ho *See* **Chikte, Shirish D., (81m:93074)**

Montroll, Elliott W. (*with* Shuler, Kurt E.) Dynamics of technological evolution: random walk model for the research enterprise. **(81a:93004)**

Müller, Rolf A. Adaptive stochastic state space models for population forecasting. **(81m:92045)**

Pfaffinger, Dieter D. Analytical evaluation of modal covariance matrices. **(81k:70020)**

Ryan, E. P. *See* **Ichikawa, Akira, (81m:93066)**

Shuler, Kurt E. *See* **Montroll, Elliott W., (81a:93004)**

Šlipienytė, D. Recurrence algorithms of statistical criterion for nonstationary detection of system with correlated noise. (Russian. Lithuanian and Russian summaries) **(81k:93067)**

Tzafestas, S. G. Parameter adaptive control of stochastic distributed systems. **(81m:93090)**

Wickwire, Kenneth H. The Poisson disorder problem for large intensities. **(81d:62084)**

93E99 None of the above, but in this section

Åström, Karl J. Piecewise deterministic signals. **81b:93087**

Baĭsakalov, I. B. Existence of the solution of a control problem with incomplete information. (Russian. Kazakh summary) **81e:93098**

Baker, William P. *See* **Zazworsky, Raymond M.; et al., 81a:93120**

Birjukov, V. F. Application of the principle of complexity for optimization of a multidimensional linear steady-state system with finite memory in the presence of random effects. (Russian) **81a:93116**

Chen, Han Fu Stochastic controllability. (Chinese) **81h:93123**

On stochastic observability and controllability. **81g:93136**

Fuller, A. T. Exact analysis of a first-order relay control system with a white noise disturbance. **81g:93137**

Gak, A. A. Optimal stopping rules in algorithms for sequential quantization of continuous Markov processes. **81a:93117**

Gauvrit, M. (*with* Rodrigo, P.) Convergence des algorithmes bayesiens en boucle ouverte et fermée. (English summary) **81c:93097**

Jensen, David *See* **Zazworsky, Raymond M.; et al., 81a:93120**

Klamka, Jerzy (*with* Socha, Leslaw) Some remarks about stochastic controllability for delayed linear systems. **81i:93035**

Kogan, Ja. A. (*with* Signaevskiĭ, V. A.) Estimate of productivity of a computer operation conveyor. **81a:93118**

Papadopoulos, Nicholas M. Teams with variable precision information structures: a model for organizational form. **81a:93119**

Rodrigo, P. *See* **Gauvrit, M., 81c:93097**

Signaevskiĭ, V. A. *See* **Kogan, Ja. A., 81a:93118**

Socha, Leslaw *See* **Klamka, Jerzy, 81i:93035**

(Varaiya, Pravin) *See* **Gauvrit, M.; et al., 81c:93097**

Zazworsky, Raymond M. (*with* Jensen, David; Baker, William P.) The set of all minimal partial realizations. **81a:93120**

secondary classifications:

Ho, Yu Chi Parametric sensitivity of a statistical experiment. **(81a:93027)**

Masuyama, Motosaburo A stochastic model of glucose tolerance test. **(81m:92010)**

Miller, Kenneth S. ★An introduction to vector stochastic processes. **(81h:60092)**

Poceluev, A. V. (*with* Topil'skiĭ, S. V.) Investigation of complicated dynamic systems by the method of local statistical nodes. **(81b:93019)**

Topil'skiĭ, S. V. *See* **Poceluev, A. V., (81b:93019)**

94–XX INFORMATION AND COMMUNICATION, CIRCUITS

94–01 Elementary exposition, textbooks

Beauchamp, Kenneth George (*with* Yuen, C. K.) ★Digital methods for signal analysis. **81b:94001**

Eichler, J. *See* **Schlatter, M., 81g:94001**

Fraser, Donald Alexander Stuart *See* **Yuen, C. K., 81k:94001**

Schlatter, M. (*with* Eichler, J.) An introduction to the Gaussian least squares approximation and its application in signal processing and system modeling. (French and German summaries) **81g:94001**

Yuen, C. K. (*with* Fraser, Donald Alexander Stuart) ★Digital spectral analysis. **81k:94001**

See also **Beauchamp, Kenneth George, 81b:94001**

secondary classifications:

Adby, Paul R. ★Applied circuit theory: matrix and computer methods. **(81j:94032)**

Blake, Ian F. ★An introduction to applied probability. **(81k:60001)**

Dörfler, Willibald ★Mathematik für Informatiker. Band 1. (German) [Mathematics for information scientists. Vol. 1] **(81h:00001a)**

★Mathematik für Informatiker. Band 2. (German) [Mathematics for information scientists. Vol. 2] **(81h:00001b)**

Muroga, Saburo ★Logic design and switching theory. **(81c:94034)**

Rohrbach, Hans Mathematical and mechanical methods in cryptography. I. **(81e:94027a)**

Mathematical and mechanical methods in cryptography. II. **(81e:94027b)**

Uščumlić, Momčilo Mathematical theory of communication. (Serbo-Croatian) **(81a:94022)**

94–02 Advanced exposition (research surveys, monographs, etc.)

secondary classifications:

Ahlswede, Rudolf (*with* Wegener, Ingo) ★Suchprobleme. (German) [Search problems] **(81d:94022)**

Hurst, Stanley L. ★The logical processing of digital signals. **(81c:94044)**
Lifermann, Jean ★Les méthodes rapides de transformation du signal: Fourier, Walsh, Hadamard, Haar. (French) [Rapid signal transformation methods: Fourier, Walsh, Hadamard, Haar] **(81j:94002)**
(Longo, Giuseppe) *See* **Algebraic coding theory and applications, (81k:94026)**
Wegener, Ingo *See* **Ahlswede, Rudolf, (81d:94022)**
Algebraic coding theory and applications ★Algebraic coding theory and applications. **(81k:94026)**
Coding theory ★Algebraic coding theory and applications. **(81k:94026)**
Summer School:
Algebraic Coding Theory and Applications ★Algebraic coding theory and applications. **(81k:94026)**
Udine ★Algebraic coding theory and applications. **(81k:94026)**

94–03 Historical (must also be assigned at least one classification number from Section 01)

secondary classifications:

Good, I. J. Pioneering work on computers at Bletchley. (*See* **81i:68002**)

94–04 Explicit machine computation and programs (not the theory of computation or programming)

94–06 Proceedings, conferences, etc.

(Bloh, È. L.) *See* **Construction and analysis of information transmission systems, 81i:94001**
(Garmaš, V. A.) *See* **Telephone traffic theory and networks with controllable elements, 81i:94003**
(Harkevič, A. D.) *See* **Telephone traffic theory and networks with controllable elements, 81i:94003**
(Nelmetdinov, T. K.) *See* **Information reception and processing in structurally complex systems, 81i:94002**
Cachan ★Théorie de l'information. (French) [Information theory] **81e:94001**
Colloques Internationaux du Centre National de la Recherche Scientifique ★Théorie de l'information. (French) [Information theory] **81e:94001**
Colloquium:
CNRS, Recent Developments in Information Theory and their Applications ★Théorie de l'information. (French) [Information theory] **81e:94001**
Computing ★FTCS-9. **81m:94001**
★FTCS-10. **81m:94002**
Conference:
Fault-Tolerant Computing ★FTCS-8. **81b:94002**
Construction and analysis of information transmission systems ★Построение и анализ систем передачи информации. (Russian) [Construction and analysis of information transmission systems] **81i:94001**
Fault-tolerant computing ★FTCS-8. **81b:94002**
★FTCS-10. **81m:94002**
FTCS ★FTCS-8. **81b:94002**
★FTCS-9. **81m:94001**
★FTCS-10. **81m:94002**
Information reception and processing in structurally complex systems ★Прием и обработка информации в сложных информационных системах. Вып. 8. (Russian) [Information reception and processing in structurally complex information systems. No. 8] **81i:94002**
Information theory ★Théorie de l'information. (French) [Information theory] **81e:94001**
Information transmission systems ★Построение и анализ систем передачи информации. (Russian) [Construction and analysis of information transmission systems] **81i:94001**
Kyoto ★FTCS-10. **81m:94002**
Ljubljana ★Proceedings of the Fourth International Symposium on Network Theory. **81b:94003**
Madison, Wis. ★FTCS-9. **81m:94001**
Multiple-valued logic ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. **81a:94001**
Network theory ★Proceedings of the Fourth International Symposium on Network Theory. **81b:94003**
Proceedings:
International Symposium on Multiple-Valued Logic ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. **81a:94001**
International Symposium on Network Theory ★Proceedings of the Fourth International Symposium on Network Theory. **81b:94003**
Rosemont, Ill. ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. **81a:94001**
Symposium:
Fault-Tolerant Computing ★FTCS-10. **81m:94002**
Multiple-Valued Logic ★Proceedings of the Eighth International Symposium on Multiple-Valued Logic. **81a:94001**
Network Theory ★Proceedings of the Fourth International Symposium on Network Theory. **81b:94003**
Telephone traffic theory and networks with controllable elements ★Теория телеграфика и сети с управляемыми элементами. (Russian) [Telephone traffic theory and networks with controllable elements] **81i:94003**
Toulouse ★FTCS-8. **81b:94002**

secondary classifications:

(Apostolakis, G.) *See* **Synthesis and analysis methods for safety and reliability studies, (81j:93008)**
(Chan, Shu Park) *See* **Conference: Asilomar, Circuits, Systems and Computers, (81m:93004)**
(Garribba, S.) *See* **Synthesis and analysis methods for safety and reliability studies, (81j:93008)**
(Hušková, Marie) *See* **Proceedings: Prague Symposium on Asymptotic Statistics, (81c:62005)**
(Iracki, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Lupanov, O. B.) *See* **Cybernetics collection, (81i:68007)**
(Mahmudov, Ju. A.) *See* **Questions of engineering cybernetics, (81i:90007)**
(Malanowski, K.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
(Mandl, Petr) *See* **Proceedings: Prague Symposium on Asymptotic Statistics, (81c:62005)**
(Samet, P. A.) *See* **EURO IFIP, (81c:68003)**
(Volta, G.) *See* **Synthesis and analysis methods for safety and reliability studies, (81j:93008)**
(Waluklewicz, S.) *See* **Optimization techniques, (81j:49001a)** *and* **Optimization techniques, (81j:49001b)**
Applied information technology ★EURO IFIP 79. **(81c:68003)**
Asymptotic statistics ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. **(81c:62005)**
Circuits ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. **(81m:93004)**
Computers ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. **(81m:93004)**
Conference:
Asilomar, Circuits, Systems and Computers ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. **(81m:93004)**
European, Applied Information Technology ★EURO IFIP 79. **(81c:68003)**
Cybernetics collection ★Кибернетический сборник. Новая серия. Вып. 15. (Russian) [Cybernetics collection. New series. No. 15] **(81i:68007)**
Engineering cybernetics ★Вопросы технической кибернетики. (Russian) [Questions of engineering cybernetics] **(81i:90007)**
EURO IFIP ★EURO IFIP 79. **(81c:68003)**
Hradec Králové ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. **(81c:62005)**
IFIP Conference:
Optimization Techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
London ★EURO IFIP 79. **(81c:68003)**
NATO Advanced Study Institute:
Synthesis and Analysis Methods for Safety and Reliability Studies ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
Optimization techniques ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**
Pacific Grove, Calif. ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. **(81m:93004)**
Proceedings:
Prague Symposium on Asymptotic Statistics ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. **(81c:62005)**
Questions of engineering cybernetics ★Вопросы технической кибернетики. (Russian) [Questions of engineering cybernetics] **(81i:90007)**
Reliability studies ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
Symposium:
Prague, Asymptotic Statistics ★Proceedings of the Second Prague Symposium on Asymptotic Statistics. **(81c:62005)**
Synthesis and analysis methods for safety and reliability studies ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
Systems ★Thirteenth Asilomar Conference on Circuits, Systems & Computers. **(81m:93004)**
Urbino ★Synthesis and analysis methods for safety and reliability studies. **(81j:93008)**
Warsaw ★Optimization techniques. Part 1. **(81j:49001a)**
★Optimization techniques. Part 2. **(81j:49001b)**

94Axx Communication, information

94A05 Communication theory [See also 60G35.]

Arcelli, Carlo A condition for digital points removal. (German and French summaries) **81g:94002**
Barakat, Richard A random Riemann zeta function and intersymbol interference. **81b:94004**
The level-crossing rate and above-level duration time of the intensity of a Gaussian random process. **81a:94002**
Biglieri, Ezio M. *See* **Yao, Kung, 81g:94007**
Böhme, J. F. Fast computation of quadratic forms with applications to signal detection, classification, and estimation. (*See* **80j:68076**)
Bucklew, James A. (*with* Gallagher, Neal C., Jr.) Some properties of uniform step size quantizers. **81g:94003**
Cadzow, James A. High performance spectral estimation—a new ARMA method. **81h:94001**
Capetanakis, John I. Tree algorithms for packet broadcast channels. **81b:94005**
Carayannis, G. Different aspects of linear modelling for signal processing. (*See* **80j:68076**)
Castanie, F. Signal processing by random reference quantizing. (German and French summaries) **81h:94002**
Delsarte, Philippe (*with* Genin, Yves V.; Kamp, Yves G.) Half-plane Toeplitz systems. **81g:94004**

Deprettere, E. (*with* Dewilde, P.) Orthogonal cascade realization of real multiport digital filters. **81f:94001**
Dewilde, P. *See* **Deprettere, E., 81f:94001**
Fu, King Sun Syntatic pattern recognition and its applications to signal processing. (*See* **80j:68076**)
Gallagher, Neal C., Jr. *See* **Bucklew, James A., 81g:94003**
Genin, Yves V. *See* **Delsarte, Philippe; et al., 81g:94004**
Győrfi, L. (*with* Vajda, Igor) Upper bound on the error probability of detection in non-Gaussian noise. (Russian summary) **81f:94002**
Hazony, Dov (*with* Hazony, Yehonathan) Doppler invariant pulse compressors. **81g:94005**
Hazony, Yehonathan *See* **Hazony, Dov, 81g:94005**
Hodgkiss, W. S. (*with* Nolte, L. W.) On relationships between detection and estimation theory. (*See* **80j:68076**)
Holmes, Richard B. Mathematical foundations of signal processing. **81j:94001**
Jenkins, W. Kenneth Complex residue number arithmetic for high-speed signal processing. **81h:94003**
Kambo, N. S. (*with* Mehta, F. C.) Truncation error for band-limited nonstationary processes. **81a:94003**
(*with* Mehta, F. C.) An upper bound on the mean-square error in the sampling expansion for non-band-limited processes. **81d:94001**
Kamp, Yves G. *See* **Delsarte, Philippe; et al., 81g:94004**
Kanetkar, Sharad V. (*with* Wagh, Meghanad D.) Group character tables in discrete transform theory. **81b:94006**
King, Maurice A., Jr. Three-dimensional geometric moment bounding techniques. **81g:94006**
Kiallewicz, Jerzy A problem of synthesis of optimal filters for data transmission. (Polish. English and Russian summaries) **81b:94007**
Kovanic, Pavel Classification of linear estimators. **81m:94003**
Kozlowski, Aleksander Priorities of terminals with uncontrolled access to a radio channel in a tele-information network. (Polish. English, French, German and Russian summaries) **81k:94002**
Lacny, Janusz Certain analytic results for buffering disciplines in nodes of teleprocessing networks. (Russian summary) **81a:94004**
Makhoul, J. *See* **Viswanathan, R., (*See* 80j:68076)**
Mazo, J. E. Analysis of decision-directed equalizer convergence. **81k:94003**
Mehta, F. C. *See* **Kambo, N. S., 81a:94003** *and* **Kambo, N. S., 81d:94001**
Messerschmitt, David G. Accumulation of distortion in tandem communication links. **81a:94005**
Muller, George M. Spline filters. **81a:94006**
Netravali, A. N. *See* **Stuller, J. A., 81a:94008**
Nolte, L. W. *See* **Hodgkiss, W. S., (*See* 80j:68076)**
Schmelovsky, K.-H. Application of Bayes estimation for signal processing and control. (*See* **81j:93009**)
Shapiro, Jeffrey H. *See* **Yuen, Horace P., 81a:94010**
Splettstösser, W. Error estimates for sampling approximation of nonbandlimited functions. **81a:94007**
Stens, R. L. Approximation to duration-limited functions by sampling sums. (German and French summaries) **81d:94002**
Stuller, J. A. (*with* Netravali, A. N.) Transform domain motion estimation. **81a:94008**
Šveckiĭ, B. I. *See* **Višenčuk, I. M.; et al., 81d:94003**
Trocenko, V. V. *See* **Višenčuk, I. M.; et al., 81d:94003**
Vajda, Igor *See* **Győrfi, L., 81f:94002**
VandeLinde, V. David Robust techniques in communication. (*See* **81e:62032**)
Višenčuk, I. M. (*with* Trocenko, V. V.; Šveckiĭ, B. I.) Analysis of transient processes in computational converters of integral signal parameters. (Russian) **81d:94003**
Viswanathan, R. (*with* Makhoul, J.) Adaptive lattice methods for linear predictive signal processing. (*See* **80j:68076**)
Wagh, Meghanad D. *See* **Kanetkar, Sharad V., 81b:94006**
Weinberg, Aaron The effects of repeater hard-limiting, filter distortion, and noise on a pseudo-noise, time-of-arrival estimation system. **81a:94009**
Wise, Gary L. The effect of a zero memory nonlinearity on the bandlimitedness of contaminated Gaussian inputs. **81b:94008**
Wyner, Aaron D. An analog scrambling scheme which does not expand bandwidth. II. Continuous time. **81c:94001**
Yao, Kung (*with* Biglieri, Ezio M.) Multidimensional moment error bounds for digital communication systems. **81g:94007**
Yuen, Horace P. (*with* Shapiro, Jeffrey H.) Optical communication with two-photon coherent states. III. Quantum measurements realizable with photoemissive detectors. **81a:94010**

secondary classifications:

Balakrishnan, A. V. Nonlinear white noise theory. **(81i:60045)**
Borchi, E. (*with* Pelosi, G.) A quantum mechanical derivation of the general uncertainty relation for real signals in communication theory. **(81k:81005)**
Burnaev, M. V. Sequential discrimination of hypotheses with control of observations. (Russian) **(81k:62116)**
Butzer, P. L. (*with* Stens, R. L.; Wehrens, M.) The continuous Legendre transform, its inverse transform, and applications. **(81h:44002)**
Chen, Wai Kai Unified theory of broadband matching. **(81m:94026)**
Fraser, Donald Alexander Stuart *See* **Yuen, C. K., (81k:94001)**
Ikeda, Masao (*with* Šiljak, D. D.; White, Dennis E.) Suboptimal decentralized control of systems with overlapping information sets. (*See* **81m:93004**)
Kayran, A. H. (*with* King, R. A.) Comments on least-square inverse polynomials and a counterexample for Jury's conjecture. **(81j:93048)**
Kedem, Benjamin ★Binary time series. **(81d:62096)**
King, R. A. *See* **Kayran, A. H., (81j:93048)**
Larimore, M. G. Hyperstability and adaptive filtering. (*See* **81m:93004**)
Meditch, James S. On the representation of optimal fixed-lag smoothers for continuous-time random processes. **(81c:93094)**
Nicia, A. Impulse response of a step-index fiber including a gap. **(81d:78005)**
Pelosi, G. *See* **Borchi, E., (81k:81005)**
(Radewan, C. H.) *See* **Woods, John W., (81b:93074)**
Rybina, I. On the question of studying numbers with negative kernels in nonpositional codes. (Russian) **(81f:10013)**
Šiljak, D. D. *See* **Ikeda, Masao; et al., (*See* 81m:93004)**
Stens, R. L. *See* **Butzer, P. L.; et al., (81h:44002)**
Teague, Michael Reed Image analysis via the general theory of moments. **(81f:78002)**
Veillon, Françoise One pass computation of morphological and geometrical properties of objects in digital pictures. (German and French summaries) **(81g:68123)**
Wehrens, M. *See* **Butzer, P. L.; et al., (81h:44002)**
White, Dennis E. *See* **Ikeda, Masao; et al., (*See* 81m:93004)**
Woods, John W. Correction to: "Kalman filtering in two dimensions" [IEEE Trans. Inform. Theory **23** (1977), no. 4, 473–482; MR **57** #9250] by Woods and C. H. Radewan. **(81b:93074)**
(Yovits, Marshall C.) *See* **Advances in computers, (81f:68004)**
Yuen, C. K. (*with* Fraser, Donald Alexander Stuart) ★Digital spectral analysis. **(81k:94001)**
Advances in computers ★Advances in computers. Vol. 18. **(81f:68004)**
Computers ★Advances in computers. Vol. 18. **(81f:68004)**

94A11 Application of orthogonal functions in communication

Arambepola, Bernard (*with* Rayner, P. J. W.) Discrete transforms over polynomial rings with applications in computing multidimensional convolutions. **81h:94004**
Burkhardt, Hans (*with* Müller, Xaver) On invariant sets of a certain class of fast translation-invariant transforms. **81h:94005**
Chen, Chi Tsong Padé approximants of noncausal digital filters. **81k:94004**
Donevski, S. D. A modified algorithm for a fast Walsh-Paley transform. (Bulgarian. Russian and English summaries) **81d:94004**
Grace, O. D. Instantaneous power spectra. **81k:94005**
Hübler, Albrecht (*with* Klette, Reinhard) On parallel realization of the fast Fourier transformation of $N \times N$ matrices. (German and Russian summaries) **81k:94006**
Jaroslavskiĭ, L. P. Shifted discrete Fourier transformations. **81g:94008**
Jarry, Pierre Stability and synthesis of intermediate polynomials. **81c:94002**
Kawamura, Masahiko (*with* Tanaka, Sueo) Proof of sampling theorem in sequency analysis using extended Walsh functions. **81i:94004**
Klette, Reinhard *See* **Hübler, Albrecht, 81k:94006**
Lifermann, Jean ★Les méthodes rapides de transformation du signal: Fourier, Walsh, Hadamard, Haar. (French) [Rapid signal transformation methods: Fourier, Walsh, Hadamard, Haar] **81j:94002**
Maher, David P. On Fourier transforms over extensions of finite rings. **81e:94003**
Morgera, Salvatore D. Efficient synthesis and implementation of large discrete Fourier transformations. **81e:94002**
Müller, Xaver *See* **Burkhardt, Hans, 81h:94005**
Perov, V. P. Synthesis of self-adaptive informational systems in an orthogonal basis. **81i:94005**
Rayner, P. J. W. *See* **Arambepola, Bernard, 81h:94004**
Stanković, Miomir S. (*with* Stanković, Radomir S.) Generalised Poisson transform. **81e:94003**
Stanković, Radomir S. *See* **Stanković, Miomir S., 81e:94003**
Tanaka, Sueo *See* **Kawamura, Masahiko, 81i:94004**
Zohar, Shalhav A prescription of Winograd's discrete Fourier transform algorithm. **81a:94011**

secondary classifications:

Alparslan, Erhan A computer number base in finite p-adic numbers. (Turkish summary) **(81e:68003)**
Auslander, Louis (*with* Tolimieri, R.) Is computing with the finite Fourier transform pure or applied mathematics? **(81e:42020)**
Bracewell, Ronald N. ★The Fourier transform and its applications. **(81k:42011)**
Dubois, Eric (*with* Venetsanopoulos, Anastasios N.) The generalized discrete Fourier transform in rings of algebraic integers. **(81f:12013)**
Efimov, A. V. (*with* Zolotareva, S. Ju.) Multiplicative Fourier integral and its discrete analogues. (Russian. English summary) **(81j:42045)**
Favella, Luigi F. Mathematical foundations of ECG map reconstruction. **(81h:92003)**
Forte, F. *See* **Lyle, W. D., Jr., (81k:44004)**
Kak, Subhash The discrete finite Hilbert transform. **(81f:44009)**
Lazard, C. *See* **Lazard, D., (81a:10014)**
Lazard, D. (*with* Lazard, C.) Sinusoïdes binaires. **(81a:10014)**
Lyle, W. D., Jr. (*with* Forte, F.) A useful property of the coefficients of a Walsh-Hadamard transform. **(81k:44004)**
Mejran, Zbigniew Error analysis in the fast Fourier transform algorithm for real data. (Polish) **(81g:65187)**
Mescheder, Bernhard On the number of active $*$-operations needed to compute the discrete Fourier transform. **(81g:68069)**
Raković, Branko D. (*with* Vasić, Petar M.) Some extremal properties of orthogonal polynomials. **(81f:33014)**
Rose, Donald J. Matrix identities of the fast Fourier transform. **(81j:42019)**
Splettstösser, W. (*with* Wagner, Heinz-Josef) Eine dyadische Infinitesimalrechnung für Haar-Funktionen. (English and Russian summaries) **(81h:42024)**
Steiner, Antonio A uniqueness theorem for square integrable high-pass functions. **(81m:42007)**
Su, Wei Yi On an extremum problem for n-variable Walsh transforms. (Chinese. English summary) **(81j:42050)**
Tolimieri, R. *See* **Auslander, Louis, (81e:42020)**
Vasić, Petar M. *See* **Raković, Branko D., (81f:33014)**
Venetsanopoulos, Anastasios N. *See* **Dubois, Eric, (81f:12013)**

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Sallantin, Jean *See* **Van der Pyl, Thierry, (81g:68122)**

Sanchis, C. *See* **Trillas Ruiz, Enrique, (81g:94082)**

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A note on the upper bound for the difference between two entropies. **(81j:60062b)**

Generalized entropy of deleted point processes. **(81d:60056)**

94A24 Coding theorems (Shannon theory)

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Başar, Tamer *See* **Başar, Tangül Ü., 81a:94024**

Başar, Tangül Ü. (*with* Başar, Tamer) Optimum linear coding in continuous-time communication systems with noisy side information at the decoder. **81a:94024**

Bassalygo, L. A. (*with* Zinov'ev, V. A.; Zjablov, V. V.; Pinsker, M. S.; Poltyrev, G. Š.) Bounds for codes with unequal protection of two sets of messages. **81c:94016**

Costello, Daniel J., Jr. *See* **Yu, Christopher C. H., 81b:94023**

Csiszár, Imre Joint source-channel error exponent. (Russian summary) **81j:94012**

Djačkov, A. G. Error probability bounds for two models of randomized design of elimination experiments. **81g:94015**

Downey, Charles P. (*with* Karlof, John K.) Group codes for the Gaussian broadcast channel with two receivers. **81g:94016**

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Iizuka, Ikuo (*with* Kasahara, Masao; Namekawa, Toshihiko) Block codes capable of correcting both additive and timing errors. **81g:94017**

Kacman, G. L. Lower bounds for the volume of error-correcting codes in channels with multiple access. **81k:94019**

Karlof, John K. *See* **Downey, Charles P., 81g:94016**

Kasahara, Masao *See* **Iizuka, Ikuo; et al., 81g:94017**

Khanna, Ravinder Kumar *See* **Sharma, Bhu Dev, 81h:94014**

Namekawa, Toshihiko *See* **Iizuka, Ikuo; et al., 81g:94017**

Obkubo, Motoaki Concatenated codes for multiple access channels. **81d:94017**

Pilipčuk, N. I. Synchronization errors in an adaptive quantizer. **81c:94018**

Pinsker, M. S. *See* **Bassalygo, L. A.; et al., 81c:94016**

Piret, Philippe Wire-tapping of a binary symmetric channel. **81i:94014**

Poltyrev, G. Š. *See* **Bassalygo, L. A.; et al., 81c:94016**

Pradhan, Dhiraj K. A new class of error-correcting/detecting codes for fault-tolerant computer applications. **81c:94019**

Rublik, František Simultaneous channels decomposable into memoryless components. I. **81g:94018a**

Simultaneous channels decomposable into memoryless components. II. **81g:94018b**

Sharma, Bhu Dev (*with* Khanna, Ravinder Kumar) Integer characterization of binary and m-ary Gray codes. **81h:94014**

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Blakley, G. R. (*with* Borosh, I.) Rivest-Shamir-Adleman public key cryptosystems do not always conceal messages. **(81e:94026)**

Borosh, I. *See* **Blakley, G. R., (81e:94026)**

Dundua, A. A. (*with* Sapožnikov, V. V.; Sapožnikov, Vl. V.) On coding the states of asynchronous automatic devices by a code with constant weight. (Russian. Georgian and English summaries) **(81c:68045)**

Karpovsky, Mark (*with* Trachtenberg, E. A.) Fourier transform over finite groups for error detection and error correction in computation channels. **(81f:94020)**

Longo, Giuseppe (*with* Sgarro, Andrea) The error exponent for the testing of simple statistical hypotheses: a combinatorial approach. **(81m:62040)**

Nemetz, T. On the word-lengths of Huffman codes. **(81k:94021)**

Sapožnikov, V. V. *See* **Dundua, A. A.; et al., (81c:68045)**

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94A29 Source coding

Ahlswede, Rudolf Coloring hypergraphs: a new approach to multi-user source coding. I. **81a:94026**

Csiszár, Imre (*with* Körner, Janos) Towards a general theory of source networks. **81c:94020**

Davisson, Lee D. (*with* Leon-Garcia, Alberto) A source matching approach to finding minimax codes. **81c:94021**

Delsarte, Philippe (*with* Piret, Philippe) Combinatorial properties of good codes for binary autoregressive sources. **81b:94024**

Flanagan, J. L. Parametric coding of speech spectra. **81e:94013**

Fontana, Robert J. Universal codes for a class of composite sources. **81g:94019**

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Khanna, Ravinder Kumar *See* **Sharma, Bhu Dev, 81f:94015**
Körner, Janos *See* **Csiszár, Imre, 81c:94020**
Kolelev, V. N. Irregular convoluted coding of a sequence of independent binary symbols. (Russian) **81c:94022**
Leon-Garcia, Alberto *See* **Davisson, Lee D., 81c:94021**
Longo, Giuseppe Memoryless source coding. (Italian. English summary) **81c:94023**
(*with* Sgarro, Andrea) The source coding theorem revisited: a combinatorial approach. **81a:94027**
Mackenthun, Kenneth M., Jr. (*with* Pursley, Michael B.) Variable-rate universal block source coding subject to a fidelity constraint. **81f:94014**
An evaluation of the Wyner-Ziv rate region. **81b:94025**
Martin, Donald R. Universal source coding of finite alphabet sources via composition classes. **81c:94014**
Nemetz, T. On the word-lengths of Huffman codes. **81k:94021**
Paz, Azaria Fibonacci encoding—to combat time dither in digital transmission. (Italian summary) **81d:94019**
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Rissanen, Jorma Minimax codes for finite alphabets. **81e:94015**
Rubin, Frank Arithmetic stream coding using fixed precision registers. **81a:94028**
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Sgarro, Andrea *See* **Longo, Giuseppe, 81a:94027**
Sharma, Bhu Dev (*with* Khanna, Ravinder Kumar) On level-weight studies of binary and *m*-ary Gray codes. **81f:94015**
Šujan, Štefan Epsilon-rates, epsilon-quantiles, and group coding theorems for finitely additive information sources. **81j:94014**
Wei, Victor K. W. (*with* Scholtz, Robert A.) On the characterization of statistically synchronizable codes. **81k:94022**
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Wyner, Aaron D. *See* **Wolf, Jack K.; et al., 81h:94015**
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Cohen, Gérard (*with* Godlewski, Philippe) Groupes de permutations et codage. **(81h:94051)**
Csiszár, Imre Joint source-channel error exponent. (Russian summary) **(81j:94012)**
Godlewski, Philippe *See* **Cohen, Gérard, (81h:94051)**
Joichi, J. T. (*with* White, Dennis E.) Gray codes in graphs of subsets. **(81h:05096)**
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94A34 Distortion theory

Arimoto, Suguru *See* **Hashimoto, Takeshi, 81g:94022**
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Finamore, Weller A. (*with* Pearlman, William A.) Optimal encoding of discrete-time continuous-amplitude memoryless sources with finite output alphabets. **81c:94024**
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Hashimoto, Takeshi (*with* Arimoto, Suguru) On the rate-distortion function for the nonstationary Gaussian autoregressive process. **81g:94022**
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Martynov, M. S. Determination of the capture band of a second-order system of automatic phase frequency control. (Russian. English summary) **81m:94018**
Pearlman, William A. *See* **Finamore, Weller A., 81c:94024**
Prucnal, Paul R. (*with* Teich, Malvin Carl) An increment threshold law for stimuli of arbitrary statistics. **81d:94020**
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Chang, Shih Chun (*with* Weldon, Edward J., Jr.) Coding for *T*-user multiple-access channels. **81h:94029**
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Ovsevič, L. A. (*with* Pinsker, M. S.) Linear transmission of Gaussian messages over a nonstationary Gaussian channel with feedback. **81b:94031**
Pinsker, M. S. *See* **Ovsevič, L. A., 81b:94031** *and* **Gel'fand, S. I., 81i:94019**
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Tounescu, Rodica On a decision mode in the case of a discrete memoryless channel. (Romanian. English summary) **81f:94017**
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Winkelbauer, Karel On the asymptotic properties of discrete channels decomposable into stable components. **81f:94018**

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Chambers, W. G. Quantum bounds on the information capacity of narrow-band free-space links without extraneous noise. **(81k:94014)**
Davisson, Lee D. (*with* Leon-Garcia, Alberto) A source matching approach to finding minimax codes. **(81c:94021)**
Dueck, Gunter The capacity region of the two-way channel can exceed the inner bound. **(81i:94009)**
Leon-Garcia, Alberto *See* **Davisson, Lee D., (81c:94021)**
Martynov, M. S. Determination of the capture band of a second-order system of automatic phase frequency control. (Russian. English summary) **(81m:94018)**
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Some traffic overflow problems with a large secondary queue. **(81h:90062)**
Rao, Ganti Prasada *See* **Saha, Dines Chandra, (81m:93024)**
Rubin, Izhak Access-control disciplines for multi-access communication channels: reservation and TDMA schemes. **(81c:68025)**
Rublik, František Simultaneous channels decomposable into memoryless components. I. **(81g:94018a)**
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Saha, Dines Chandra (*with* Rao, Ganti Prasada) Identification of lumped linear time-varying parameter systems via Poisson moment functionals. **(81m:93024)**

94A50 Theory of questionnaires

(Aggarwal, Nand Lal) *See* **Picard, Claude François, 81j:94017**
Ahlswede, Rudolf (*with* Wegener, Ingo) ★Suchprobleme. (German) [Search problems] **81d:94022**
(Ault, J. C.) *See* **Picard, Claude François, 81j:94017**
Bouchon, Bernadette Application d'une mesure d'information à la construction de questionnaires flous. (English summary) **81h:94016**
Emptoz, H. (*with* Tounissoux, D.) Utilisation des pseudoquestionnaires dans une approche métrique des problèmes de reconnaissance de formes. (English summary) **81j:94016**
Facon, Philippe Un théorème de décomposition des questionnaires optimaux identifiant des monômes booléens. Applications. (English summary) **81e:94017**
Jiroušek, Radim Bayes decision functions realized by sequential questionnaires. **81c:94027**
(Lobenberg, M.) *See* **Picard, Claude François, 81j:94017**
Picard, Claude François ★Graphs and questionnaires. **81j:94017**
Schneider, Michel Généralisation du théorème de l'information transmise par un questionnaire. (English summary) **81f:94019**
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Wegener, Ingo *See* **Ahlswede, Rudolf, 81d:94022**

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Aczel, Janos Some recent results on characterizations of measures of information. (French summary) **(81f:94005)**
Bagaev, A. P. *See* **Jarušek, V. E.; et al., (81l:93006)**
Jarušek, V. E. (*with* Bagaev, A. P.; Ros', A. A.) Construction of question-answer systems for automatic control systems. (Russian) **(81l:93006)**
Ros', A. A. *See* **Jarušek, V. E.; et al., (81l:93006)**

94A99 None of the above, but in this section

Abd-Ali, A. *See* **Evans, F. J., (*See* 80h:00004)**
Evans, F. J. (*with* Abd-Ali, A.) Systems structure and stability. (*See* **80h:00004)**
Goodman, Dennis M. *M*-dimensional linear systems: determination of impulse response support, computing spectra, and recursibility issues. (*See* **81m:93004)**
Haykin, Simon Spectral classification of radar clutter using the maximum entropy method. (*See* **80j:68076)**
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Koljada, A. A. Algorithms for the arithmetic of generalized residue class systems. (Russian) **81k:94025**
Kusov, I. F. (*with* Ivanov, Ju. L.; Samoĭlova, N. I.) Estimation of finite sets in random noises. (Russian. Georgian and English summaries) **81g:94027**
Samoĭlova, N. I. *See* **Kusov, I. F.; et al., 81g:94027**
Tong, H. On a threshold model. (*See* **80j:68076)**

secondary classifications:

Andrews, Gordon C. A general re-statement of the laws of dynamics based on graph theory. (*See* **80h:00004)**
Hadidi, M. T. (*with* Schwartz, S. C.) Linear recursive state estimators under uncertain observations. **(81a:93088)**
Schwartz, S. C. *See* **Hadidi, M. T., (81a:93088)**
Victor, Jonathan D. A counting problem arising in nonlinear systems analysis. **(81d:05009)**

94Bxx Algebraic theory of error-correcting codes

(Longo, Giuseppe) *See* **Algebraic coding theory and applications, 81k:94026**
Algebraic coding theory and applications ★Algebraic coding theory and applications. **81k:94026**
Coding theory ★Algebraic coding theory and applications. **81k:94026**
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Algebraic Coding Theory and Applications ★Algebraic coding theory and applications. **81k:94026**
Udine ★Algebraic coding theory and applications. **81k:94026**

94B05 Linear codes, general

Best, M. R. Binary codes with a minimum distance of four. **81k:94027**
Chang, Shih Chun (*with* Wolf, Jack K.) A simple derivation of the MacWilliams identity for linear codes. **81g:94028**
Colbourn, Marlene J. Some new upper bounds for constant weight codes. **81g:94029**
Conway, J. H. (*with* Pless, Vera) On the enumeration of self-dual codes. **81a:94032**
Huffman, W. Cary The biweight enumerator of self-orthogonal binary codes. **81a:94033**
Karpovsky, Mark (*with* Trachtenberg, E. A.) Fourier transform over finite groups for error detection and error correction in computation channels. **81f:94020**
Kasami, T. *See* **Kuznecov, Alexander V.; et al., 81h:94018**
Knapp, Wolfgang On the distance distribution of homogeneous codes. **81h:94017**
Kuznecov, Alexander V. (*with* Kasami, T.; Yamamura, S.) An error correcting scheme for defective memory. **81h:94018**
Maher, David P. Lee polynomials of codes and theta functions of lattices. **81h:94019**
Modular forms from codes. **81f:94021**
McLoughlin, Aileen M. The covering radius of the $(m-3)$rd order Reed-Muller codes and a lower bound on the $(m-4)$th order Reed-Muller codes. **81a:94034**
Mykkeltveit, Johannes J. The covering radius of the (128, 8) Reed-Muller code is 56. **81c:94018**
Newman, Bill (*with* Ward, Harold N.) The weight enumerator of a family of codes over GF(4). **81b:94032**
Piret, Philippe Good linear codes of length 27 and 28. **81c:94028**
Pless, Vera (*with* Sloane, N. J. A.; Ward, Harold N.) Ternary codes of minimum weight 6 and the classification of the self-dual codes of length 20. **81b:94033**
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Roos, Cornelis On metric and cometric association schemes. **81k:94020**
Sloane, N. J. A. *See* **Pless, Vera; et al., 81b:94033**
Soblik, Fred Kombinatorische Aspekte der Codierungstheorie. **81c:94029**
Trachtenberg, E. A. *See* **Karpovsky, Mark, 81f:94020**
de Vroedt, C. On bounds for codes in Hamming schemes and Johnson schemes. **81k:94028**
Ward, Harold N. Center sets and ternary codes. **81m:94019**
See also **Newman, Bill, 81b:94032** *and* **Pless, Vera; et al., 81b:94033**
Wolf, Jack K. *See* **Chang, Shih Chun, 81g:94028**
Wolfmann, Jacques Résultats sur les paramètres des codes linéaires. (English summary) **81c:94030**
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Assmus, E. F., Jr. (*with* van Lint, J. H.) Ovals in projective designs. **(81f:05019)**
Bassalygo, L. A. (*with* Zinov'ev, V. A.; Zjablov, V. V.; Pinsker, M. S.; Poltyrev, G. Š.) Bounds for codes with unequal protection of two sets of messages. **(81c:94016)**
Blake, Ian F. *See* **Safavi-Naini, R., (81m:05029)**
Bose, Bella (*with* Rao, T. R. N.) Separating and completely separating systems and linear codes. **(81k:94055)**
Cannonito, F. B. A note on normal and nonnormal subgroups of given index. **(81j:20041)**
Deza, M. On permutation cliques. **(81m:05006)**
Hwang, Tai Yang Efficient optimal decoding of linear block codes. **(81k:94035)**
Karpovsky, Mark (*with* Mil'man, V. D.) On subspaces contained in subsets of finite homogeneous spaces. **(81g:05013)**
van Lint, J. H. *See* **Assmus, E. F., Jr., (81f:05019)**
Mihaĭljuk, M. V. Complexity of the realization of the characteristic function of linear sets. (Russian) **(81f:94040)**
Mil'man, V. D. *See* **Karpovsky, Mark, (81g:05013)**
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Baldwin, J. F. (*with* Pilsworth, B. W.) A model of fuzzy reasoning through multivalued logic and set theory. **(81h:03051)**

Fuzzy logic and approximate reasoning for mixed input arguments. **(81h:03052)**

(*with* Guild, N. C. F.) On the satisfaction of a fuzzy relation by a set of inputs. **(81h:03102)**

(*with* Guild, N. C. F.) The resolution of two paradoxes by approximate reasoning using a fuzzy logic. **(81m:03031)**

Bilim, A. F. Truth of fuzzy set similarity. (Russian. English summary) **(81k:03028)**

Bouchon, Bernadette Application d'une mesure d'information à la construction de questionnaires flous. (English summary) **(81h:94016)**

Byatt, William J. *See* **Kandel, Abraham, (81m:60007)**

(Chang, Shi Kuo) *See* **Fuzzy sets, (81h:03105)**

Chen, Ting Peng *See* **Wu, Le Guang, (81h:05115)**

Coulon, Jean-Louis *See* **Coulon, Josette, (*See* 81m:03067)**

Coulon, Josette (*with* Coulon, Jean-Louis) Fuzzy Boolean algebras. (*See* **81m:03067**)

De Mori, Renato (*with* Saitta, Lorenza) Automatic learning of fuzzy naming relations over finite languages. **(81i:68127)**

Féron, Robert Ensembles aléatoires flous dont la fonction d'appartenance prend ses valeurs dans un treillis distributif fermé. (English summary) **(81h:60018)**

Giles, Robin A computer program for fuzzy reasoning. **(81j:68115)**

Gottwald, Siegfried A note on measures of fuzziness. (Russian and German summaries) **(81c:03048)**

Eine Anwendungsvariante der mehrwertigen Logik. **(81d:03025)**

Guida, Giovanni *See* **Averkin, A. N.; et al., (81k:68072)**

Guild, N. C. F. *See* **Baldwin, J. F., (81h:03102)** *and* **Baldwin, J. F., (81m:03031)**

Gupta, Madan M. *See* **Ragade, Rammohan K., (81i:03086)**

Hisdal, Ellen Possibilistically dependent variables and a general theory of fuzzy sets. **(81b:03060)**

Jumarie, Guy A subjectivistic calculus. **(81f:83004)**

Kandel, Abraham (*with* Yager, Ronald R.) A 1979 bibliography on fuzzy sets, their applications, and related topics. **(81b:00008)**

Fuzzy dynamical systems and the nature of their solutions. **(81k:03055)**

(*with* Byatt, William J.) Fuzzy processes. **(81m:60007)**

Kickert, Walter J. M. Towards an analysis of linguistic modelling. **(81d:68135)**

Kim, Ki Hang (*with* Roush, Fred W.) Generalized fuzzy matrices. **(81i:15027)**

Klement, Erich Peter Extension of probability measures to fuzzy measures and their characterization. (*See* **81m:03067**)

See also **Proceedings: International Seminar on Fuzzy Set Theory, (81m:03067)**

Kokawa, Masasumi (*with* Nakamura, Kahei; Oda, Moriya) Fuzziness and catastrophe in estimation and decision processes. **(81c:58020)**

Kwakernaak, Huibert Fuzzy random variables. I. Definitions and theorems. **(81e:60002a)**

An algorithm for rating multiple-aspect alternatives using fuzzy sets. **(81a:90012)**

Fuzzy random variables. II. Algorithms and examples for the discrete case. **(81e:60002b)**

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MacVicar-Whelan, P. J. Fuzzy logic: an alternative approach. **(81j:03040)**

Mamdani, E. H. (*with* Sembi, B. S.) Process control using fuzzy logic. **(81k:93048)**

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Miller, D. M. *See* **Muzio, J. C., (81a:03022)**

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Mukaidono, Masao A necessary and sufficient condition for fuzzy logic functions. **(81d:03026)**

Muzio, J. C. (*with* Miller, D. M.) A class of two-place three-valued unary generators. **(81a:03022)**

Nakamura, Kahei *See* **Kokawa, Masasumi; et al., (81c:58020)**

Nguyen, Hung Trung Conditioning in possibility theory. **(81d:93009)**

Oda, Moriya *See* **Kokawa, Masasumi; et al., (81c:58020)**

Pilsworth, B. W. *See* **Baldwin, J. F., (81h:03051)**

Pospelov, D. A. *See* **Averkin, A. N.; et al., (81k:68072)**

Prade, Henri M. Nomenclature of fuzzy measures. (*See* **81m:03067**)

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Sakemi, Yasuhiro A distributive law over fuzzy theory and its application. **(81e:68075)**

Schwyhla, Werner Conditions for a fuzzy probability measure to be an integral. (*See* **81m:03067**)

Sembi, B. S. (*with* Mamdani, E. H.) On the nature of implication in fuzzy logic. **(81d:03027)**

See also **Mamdani, E. H., (81k:93048)**

Somalvico, Marco *See* **Averkin, A. N.; et al., (81k:68072)**

Stickel, Mark E. Fuzzy four-valued logic for inconsistency and uncertainty. **(81d:03028)**

Tanaka, Kokichi *See* **Mizumoto, Masaharu, (81e:03054)**

Tong, Richard M. The construction and evaluation of fuzzy models. **(81a:68115)**

(Wang, Paul P.) *See* **Fuzzy sets, (81h:03105)**

Wu, Le Guang (*with* Chen, Ting Peng) Some problems concerning fuzzy graphs. (Chinese. English summary) **(81h:05115)**

Yager, Ronald R. A note on probabilities of fuzzy events. **(81g:60011)**

A measurement-informational discussion of fuzzy union and intersection. **(81g:03064)**

On the measure of fuzziness and negation. II. Lattices. **(81e:03055)**

A foundation for a theory of possibility. **(81e:03022)**

See also **Kandel, Abraham, (81b:00008)**

Zadeh, L. A. A theory of approximate reasoning. **(81m:03034)**

(Živogljadov, V. P.) *See* **Optimization and adaptive control in large-scale systems, (81j:93005)**

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Durham, N.C. ★Fuzzy sets. **(81h:03105)**

Fuzzy set theory ★Proceedings of the International Seminar on Fuzzy Set Theory. **(81m:03067)**

Fuzzy sets ★Fuzzy sets. **(81h:03105)**

Information systems ★Fuzzy sets. **(81h:03105)**

Linz ★Proceedings of the International Seminar on Fuzzy Set Theory. **(81m:03067)**

Optimization and adaptive control in large-scale systems ★Оптимизация и адаптивное управление в больших системах. (Russian) [Optimization and adaptive control in large-scale systems] **(81j:93005)**

Policy analysis ★Fuzzy sets. **(81h:03105)**

Proceedings:

International Seminar on Fuzzy Set Theory ★Proceedings of the International Seminar on Fuzzy Set Theory. **(81m:03067)**

Seminar:

Fuzzy Set Theory ★Proceedings of the International Seminar on Fuzzy Set Theory. **(81m:03067)**

Symposium:

Policy Analysis and Information Systems ★Fuzzy sets. **(81h:03105)**

1980 MATHEMATICS SUBJECT CLASSIFICATION

Compiled in the Editorial Offices of MATHEMATICAL REVIEWS and ZENTRALBLATT FÜR MATHEMATIK

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80 Classical thermodynamics, heat transfer
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* For a listing of the subject classification used in Mathematical Reviews from 1973–1979 see the index to Volume 54 (December 1977) or Volumes 46–52.

1980 MATHEMATICS SUBJECT CLASSIFICATION

This is a corrected reprinting of the 1980 Mathematics Subject Classification. The corrections carried out since the second printing (in the 1979 Mathematical Reviews Index) include the following:

Section 03–XX has undergone some revision; in particular, the entries 03B48, 03B65, 03C07, 03C13, 03C57, 03C62, 03C68, 03E47, 03F07 and 03F40 are new. Section 78A57 was relabeled 78A97; section 81H05 was expanded into 81Hxx, with three subheadings. The remaining new entries are: 05B07; 10A50; 17A36, 17A75, 17D15, 17D20, 17D25, 17D92; 20F17; 31C35; 35J85, 35K85, 35L85; 41A80; 53C12; 57N13, 57Q12, 57R19; 65L50, 65L60, 65M50, 65M60, 65N50; 68D22; 70K40, 70K50, 70Q05; 73C60, 73D50, 73D70, 73E50, 73K03; 76A60, 76B40, 76D07; 78A60, 78A70; 80A32; 81D30, 81E20, 81E25; 82A31, 82A43, 82A51, 82A57, 82A68; 83C47, 83E50; 86A60; 90B50. There are 40 entries in which small changes in the description or additions in the cross references were carried out.

Instructions for using the 1980 Mathematics Subject Classification

These instructions apply uniformly to all fields listed. The main purpose of the classification is to help all readers to find the items of present or potential interest to them as readily as possible—in MR, in Zbl, or anywhere else where this classification system is used. The review of a paper or book should be printed in the section where it will receive the broadest attention from all readers possibly interested in it—these include both people working in that area and people who are familiar with that area and apply its results and methods elsewhere (inside or outside of mathematics). It will be extremely useful for both readers and classifiers to familiarize themselves with the entire classification system and thus to become aware of all the classifications of possible interest to them.

Every paper or book reviewed in MR receives precisely one "primary" classification number; it is simply the number of the section in which the review of the item will be printed. This section should be the one that covers the principal contribution. When a paper contains several principal contributions in different areas, the primary classification should cover the "most important" among them. A paper or book may receive one or several "secondary" classification numbers (or "cross-references"), to cover any remaining principal contributions, ancillary results, motivation or origin of the problems discussed, intended or potential field of application, or other significant aspects worthy of notice.

The "primary" principal contribution should be the one including the most important part of the work actually done in the paper. For example, a paper whose main overall content is the solution of a problem in graph theory, which arose in computer science and whose solution is (perhaps) at present only of interest to computer scientists, should receive its primary classification in 05C and a cross-reference in 68; conversely, papers whose overall content lies mainly in computer science will receive a primary classification in 68, even if they make heavy use of graph theory and prove several new graph theoretic results along the way.

For any paper or book with its primary classification in (i.e., printed in) an "applied" section (68 through 94), it is recommended to give a cross-reference in some mathematics section(s) (00 through 65) whenever that is appropriate. Do not use 00A89 as a primary classification.

There are two types of cross-references given after many classifications in the list. The first type is of the form "{For A, see X}"; if this appears in section Y, it means that for contributions described by A one should usually assign the classification X, not Y. The other type of cross-reference merely points out related classifications; it is of the form "[See also...]", "[See mainly...]", etc., and the classifications listed in the brackets may, but need not, be added to the classification of a paper, or they may be used in place of the classification where the cross-reference is given. The classifier will have to judge which classification is the most appropriate for the paper at hand.

00–XX GENERAL

- 00–01 Elementary exposition, textbooks
- 00–02 Advanced exposition (research surveys, monographs, etc.)
- 00A05 General mathematics
- 00A06 Mathematics for nonmathematicians (engineering, social sciences, etc.)
- 00A07 Problem books
- 00A10 Collections of papers; proceedings of conferences of general interest, translation volumes, etc. [See also 01A75.]
- 00A15 General bibliographies
- 00A20 Dictionaries and other general reference works
- 00A22 Formularies
- 00A25 Methodology and philosophy of mathematics
- 00A69 General applied mathematics {For cross-reference to reviews printed in Sections 70 through 86, use 00A89.}; theory of mathematical modeling
- 00A89 Physics (to be used in cross-references to reviews printed in Sections 70 through 86, only when no other numbers from Sections 00 through 65 are suitable)
- 00A99 Miscellaneous topics

01–XX HISTORY AND BIOGRAPHY [See also the classification number –03 in the other sections.]

- 01–01 Elementary exposition, textbooks
- 01–02 Advanced exposition (research surveys, monographs, etc.)
- 01–06 Proceedings, conferences, etc.
- 01A05 General histories, source books
- 01A10 Primitive, Paleolithic, Neolithic
- 01A15 Pre-Greek, Egyptian
- 01A17 Babylonian
- 01A20 Greek
- 01A25 China
- 01A27 Japan
- 01A29 Southeast Asia
- 01A30 Islam (Medieval)
- 01A32 India
- 01A35 Medieval
- 01A40 15th and 16th centuries, Renaissance
- 01A45 17th century
- 01A50 18th century
- 01A55 19th century
- 01A60 20th century
- 01A65 Contemporary
- 01A70 Biographies, obituaries, personalia
- 01A72 Schools of mathematics
- 01A73 Universities
- 01A74 Other institutions and academies
- 01A75 Collected or selected works; reprintings or translations of classics
- 01A80 Sociology (and profession) of mathematics
- 01A99 Miscellaneous topics

03–XX MATHEMATICAL LOGIC AND FOUNDATIONS

- 03–01 Elementary exposition, textbooks
- 03–02 Advanced exposition (research surveys, monographs, etc.)
- 03–03 Historical (must also be assigned at least one classification number from Section 01)
- 03–04 Explicit machine computation and programs (not the theory of computation or programming)
- 03–06 Proceedings, conferences, etc.
- **03A05 Philosophical and critical**
- **03Bxx General logic**
- 03B05 Classical propositional logic
- 03B10 Pure first-order logic (including many-sorted logic)
- 03B15 Higher-order logic and type-theory
- 03B20 Fragments of classical logic
- 03B25 Decidability of theories and sets of sentences
- 03B30 Foundations and axiomatics of classical theories
- 03B35 Mechanization of proofs and logical operations
- 03B40 Combinatory logic and λ-calculus
- 03B45 Modal and tense logic, entailment, etc.
- 03B48 Probability and inductive logic
- 03B50 Many-valued logic
- 03B52 Fuzzy logic [See also 94D05.]

03B55 Intermediate logics
03B60 Other nonclassical logic
03B65 Logic of natural languages [See also 68Fxx.]
03B99 None of the above, but in this section

03Cxx Model theory
03C05 Equational classes, universal algebra [See also 08Axx.]
03C07 Basic properties of first-order languages and structures
03C10 Quantifier elimination and related topics
03C13 Finite models
03C15 Denumerable models
03C20 Ultraproducts and related constructions
03C25 Model-theoretic forcing
03C30 Other model constructions
03C35 Categoricity and completeness of theories
03C40 Interpolation and preservation theorems; definability
03C45 Stability and related concepts
03C50 Models with special properties (saturated, rigid, etc.)
03C52 Properties of classes of models
03C55 Set-theoretic model theory
03C57 Recursion-theoretic model theory [See also 03D45.]
03C60 Model-theoretic algebra [See also 08C10.]
03C62 Models of arithmetic and set theory [See also 03Hxx.]
03C65 Models of other specific theories
03C68 Other classical first-order model theory
03C70 Logic on admissible sets
03C75 Other infinitary logic
03C80 Logic with extra quantifiers and operators [See also 03B45.]
03C85 Second- and higher-order model theory
03C90 Nonclassical models (Boolean-valued, sheaf, etc.)
03C95 Abstract model theory
03C99 None of the above, but in this section

03Dxx Recursion theory
03D03 Thue and Post systems, etc.
03D05 Automata and formal grammars in connection with logical questions [See also 18B20, 68Dxx, 68F10.]
03D10 Turing machines and related notions [See also 68C40.]
03D15 Complexity of computation
03D20 Recursive functions and relations, subrecursive hierarchies
03D25 Recursively enumerable sets and degrees
03D30 Degrees and reducibilities
03D35 Undecidability and degrees of sets of sentences
03D40 Word problems, etc. [See also 06B25, 08A50, 20F10.]
03D45 Theory of numerations, effectively presented structures [See also 03C57.]
03D50 Recursive equivalence types of sets and structures, isols
03D55 Hierarchies
03D60 Recursion theory on ordinals, admissible sets, etc.
03D65 Higher-type and set recursion
03D70 Inductive definability
03D75 Abstract and axiomatic recursion theory
03D80 Applications
03D99 None of the above, but in this section

03Exx Set theory [See also 04–XX.]
03E05 Combinatorial set theory
03E10 Ordinal and cardinal numbers
03E15 Descriptive set theory
03E20 Other classical set theory
03E25 Axiom of choice and related propositions
03E30 Axiomatics of classical set theory and its fragments
03E35 Consistency and independence results
03E40 Other aspects of forcing and Boolean-valued models
03E45 Constructibility, ordinal definability, and related notions
03E47 Other notions of set-theoretic definability
03E50 Continuum hypothesis and Martin's axiom [See also 54A25.]
03E55 Large cardinals
03E60 Determinacy and related principles which contradict the axiom of choice
03E65 Other hypotheses and axioms
03E70 Nonclassical and second-order set theories
03E72 Fuzzy sets [See also 54A40, 94D05.]
03E75 Applications
03E99 None of the above, but in this section

03Fxx Proof theory and constructive mathematics
03F05 Cut-elimination and normal-form theorems
03F07 Structure of proofs
03F10 Functionals in proof theory
03F15 Recursive ordinals and ordinal notations
03F20 Complexity of proofs
03F25 Relative consistency and interpretations
03F30 First-order arithmetic and fragments
03F35 Second- and higher-order arithmetic and fragments [See also 03E30, 03E70.]
03F40 Gödel numberings in proof theory
03F50 Metamathematics of constructive systems
03F55 Intuitionistic mathematics
03F60 Recursive analysis
03F65 Other constructive mathematics
03F99 None of the above, but in this section

03Gxx Algebraic logic
03G05 Boolean algebras [See also 06Exx.]
03G10 Lattices and related structures [See also 06Bxx.]
03G12 Quantum logic [See also 81B10.]
03G15 Cylindric and polyadic algebras; relation algebras
03G20 Łukasiewicz and Post algebras
03G25 Other algebras related to logic
03G30 Categorical logic, topoi [See also 18B25.]
03G99 None of the above, but in this section

03Hxx Nonstandard models [See also 03C62.]
03H05 Infinitesimal analysis in pure mathematics [See also 26E35, 30G10, 54J05.]
03H10 Other applications of infinitesimal analysis
03H15 Nonstandard models of arithmetic [See also 10N15, 12L15, 13L05.]
03H20 Other nonstandard models [See also 54J05.]
03H99 None of the above, but in this section

04–XX SET THEORY [See also 03Exx.]
04–01 Elementary exposition, textbooks
04–02 Advanced exposition (research surveys, monographs, etc.)
04–03 Historical (must also be assigned at least one classification number from Section 01)
04–04 Explicit machine computation and programs (not the theory of computation or programming)
04–06 Proceedings, conferences, etc.
04A05 Relations, functions [See also 08A02.]
04A10 Transfinite numbers
04A15 Descriptive set theory; Borel classifications, Suslin schemes, etc. [See also 03E15, 28A05, 54H05.]
04A20 Combinatorial [See also 05A05.]; filters
04A25 Axiom of choice and equivalent propositions (Zorn's lemma, etc.) [See also 03E25.]
04A30 Continuum hypothesis, generalized continuum hypothesis [See also 03E50, 54A25.]
04A99 Miscellaneous topics

05–XX COMBINATORICS {For finite fields, see 12Cxx.}
05–01 Elementary exposition, textbooks
05–02 Advanced exposition (research surveys, monographs, etc.)
05–03 Historical (must also be assigned at least one classification number from Section 01)
05–04 Explicit machine computation and programs (not the theory of computation or programming)
05–06 Proceedings, conferences, etc.

05Axx Classical combinatorial problems
05A05 Combinatorial choice problems (subsets, representatives, permutations)
05A10 Factorials, binomial coefficients, combinatorial functions
05A15 Combinatorial enumeration problems, generating functions
05A17 Partitions [See also 10A45.]
05A19 Combinatorial identities
05A20 Combinatorial inequalities
05A99 None of the above, but in this section

05Bxx Designs and configurations {For applications of design theory, see 94C30.}
05B05 Block designs [See also 51E05, 62K10.]
05B07 Steiner triple systems

05B10 Difference sets (number-theoretic, group-theoretic, etc.) [See also 10L05.]
05B15 Orthogonal arrays, Latin squares, Room squares
05B20 Matrices (incidence, Hadamard, etc.)
05B25 Finite geometries [See also 51D20, 51Exx.]
05B30 Other designs, configurations [See also 51E30.]
05B35 Matroids, geometric lattices
05B40 Packing and covering [See also 10E30, 52A45.]
05B45 Tessellation and tiling problems
05B50 Polyominoes
05B99 None of the above, but in this section

05Cxx Graph theory {For applications of graphs, see 68D90, 68E10, 94C15.}
05C05 Trees
05C10 Topological graph theory, imbedding [See also 57M15, 57M25.]
05C15 Chromatic theory of graphs and maps
05C20 Directed graphs (digraphs)
05C25 Graphs and groups [See also 20F32.]
05C30 Enumeration of graphs and maps
05C35 Extremal problems
05C38 Paths and cycles
05C40 Connectivity
05C45 Eulerian and Hamiltonian graphs
05C50 Graphs and matrices
05C55 Generalized Ramsey theory
05C60 Reconstruction conjecture
05C65 Hypergraphs
05C70 Factorization, matching, covering and packing
05C75 Structural characterization of types of graphs
05C99 None of the above, but in this section

06–XX ORDER, LATTICES, ORDERED ALGEBRAIC STRUCTURES [See also 18B35.]

06–01 Elementary exposition, textbooks
06–02 Advanced exposition (research surveys, monographs, etc.)
06–03 Historical (must also be assigned at least one classification number from Section 01)
06–04 Explicit machine computation and programs (not the theory of computation or programming)
06–06 Proceedings, conferences, etc.

06Axx Ordered sets
06A05 Total order
06A10 Partial order
06A12 Semilattices [See also 20M10.]
06A15 Galois correspondences, closure operators
06A23 Complete lattices, completions
06A99 None of the above, but in this section

06Bxx Lattices [See also 03G10.]
06B05 Structure theory
06B10 Ideals, congruence relations
06B15 Representation theory
06B20 Varieties of lattices
06B25 Free lattices, projective lattices, word problems [See also 03D40, 08A50, 20F10.]
06B30 Topological lattices, order topologies [See also 06F30, 54F05, 54H12.]
06B99 None of the above, but in this section

06Cxx Modular lattices, complemented lattices
06C05 Modular lattices, Desarguesian lattices
06C10 Semimodular lattices, geometric lattices
06C15 Complemented lattices, orthocomplemented lattices
06C20 Complemented modular lattices, continuous geometries
06C99 None of the above, but in this section

06Dxx Distributive lattices
06D05 Structure and representation theory
06D10 Complete distributivity
06D15 Pseudocomplemented lattices
06D20 Heyting algebras [See also 03Gxx.]
06D25 Post algebras [See also 03G20.]
06D30 De Morgan algebras, Łukasiewicz algebras [See also 03G20.]
06D99 None of the above, but in this section

06Exx Boolean algebras [See also 03G05.]
06E05 Structure theory
06E10 Chain conditions, complete algebras
06E15 Topological representation
06E20 Boolean rings [See also 16A30, 16A32.]
06E99 None of the above, but in this section

06Fxx Ordered structures [See also 22A26, 54F05.]
06F05 Ordered semigroups [See also 20Mxx.]
06F10 Noether lattices
06F15 Ordered groups [See also 20F60.]
06F20 Ordered abelian groups, ordered linear spaces [See also 46A40.]
06F25 Ordered rings, algebras, modules {For ordered fields, see 10M15, 12J15; see also 13J25, 16A86.}
06F30 Topological lattices, order topologies [See also 06B30, 54F05, 54H12.]
06F99 None of the above, but in this section

08–XX GENERAL MATHEMATICAL SYSTEMS

08–01 Elementary exposition, textbooks
08–02 Advanced exposition (research surveys, monographs, etc.)
08–03 Historical (must also be assigned at least one classification number from Section 01)
08–04 Explicit machine computation and programs (not the theory of computation or programming)
08–06 Proceedings, conferences, etc.

08Axx Universal algebra [See also 03C05.]
08A02 Relational systems, laws of composition
08A05 Structure theory
08A30 Subalgebras, congruence relations
08A35 Automorphisms, endomorphisms
08A40 Operations, polynomials, primal algebras
08A45 Equational compactness
08A50 Word problems [See also 03D40, 20F10.]
08A55 Partial algebras
08A60 Unary algebras
08A65 Infinitary algebras
08A99 None of the above, but in this section

08Bxx Varieties
08B05 Equational logic, Mal'cev conditions
08B10 Congruence modularity, congruence distributivity
08B15 Lattices of varieties
08B20 Free algebras
08B25 Products, amalgamated products
08B30 Injectives, projectives
08B99 None of the above, but in this section

08Cxx Classes of algebras
08C05 Categories of algebras [See also 18C05.]
08C10 Axiomatic model classes [See also 03Cxx, in particular 03C60.]
08C15 Quasivarieties
08C99 None of the above, but in this section

10–XX NUMBER THEORY {Excluding 10Axx and 10Mxx, this classification does not distinguish work in the rational number fields from that in other algebraic number fields.}

10–01 Elementary exposition, textbooks
10–02 Advanced exposition (research surveys, monographs, etc.)
10–03 Historical (must also be assigned at least one classification number from Section 01)
10–04 Explicit machine computation and programs (not the theory of computation or programming)
10–06 Proceedings, conferences, etc.

10Axx Elementary number theory {For analogues in number fields, see 12A05.}
10A05 Multiplicative structure of the integers (GCD, etc.)
10A10 Congruences, primitive roots
10A15 Power residues, reciprocity
10A20 Number-theoretic functions, related numbers; inversion formulas
10A21 Counting functions
10A22 Abstract theory of number-theoretic functions
10A25 Elementary prime number theory, factorization

10A30 Algorithms and expansions; digital properties {For metric results, see 10K10.}
10A32 Continued fractions {For approximation results, see 10F20; see also 30B70, 40A15.}
10A35 Recurrence sequences
10A40 Special numbers, sequences and polynomials (e.g. Bernoulli)
10A45 Partitions
10A50 Combinatorial number theory
10A99 None of the above, but in this section

10Bxx Diophantine equations [See also 14Gxx.]
10B05 Linear, quadratic and bilinear equations
10B10 Cubic and quartic equations
10B15 Higher degree equations
10B16 Norm form equations
10B20 Multiplicative equations
10B25 Nonpolynomial equations
10B30 Equations in sufficiently many variables [See also 10J10.]
10B35 Representation problems [See also 10J10.]
10B40 *p*-adic and power series fields
10B45 Diophantine inequalities
10B99 None of the above, but in this section

10Cxx Forms (especially quadratic) {For quadratic forms in linear algebra, see 15A63.}
10C01 Forms over general fields (especially quadratic)
10C02 Forms over global rings and fields (especially quadratic)
10C03 Forms over local rings and fields (especially quadratic)
10C04 Forms over real fields
10C05 Quadratic, bilinear and Hermitian forms [See also 10E25.], general theory (including Witt rings of quadratic forms)
10C07 Class numbers of quadratic and Hermitian forms
10C10 Higher degree forms
10C15 Analytic theory (Epstein's zeta function; relations with automorphic forms and functions)
10C20 *p*-adic theory
10C25 Minima of forms [See also 10E20.]
10C30 Arithmetic properties of classical groups [See also 20Gxx.]
10C99 None of the above, but in this section

10Dxx Theory of automorphic and modular functions and forms [See also 12A67, 12B27, 14Gxx, 14Kxx, 22E50, 22E55, 30F35, 32Nxx; for relations with quadratic forms, see 10C15.]
10D05 Modular and automorphic functions
10D07 Structure of modular groups and generalizations, arithmetic groups [See also 20H05, 20H10, 22E40.]
10D12 Modular forms, one variable
10D15 Automorphic forms, one variable
10D20 Modular and automorphic forms, several variables
10D21 Hilbert modular forms and surfaces [See also 14J20.]
10D23 Congruence properties
10D24 Relations with Dirichlet series
10D25 Complex multiplication [See also 14K22.]
10D30 *p*-adic theory, local fields [See also 14G20, 22E50.]
10D35 Galois properties
10D40 Representation-theoretic methods, trace formulas
10D45 Uniformization, periods and cohomology
10D99 None of the above, but in this section

10Exx Geometry of numbers
10E05 Lattices and convex bodies [See also 10J25.]
10E10 Nonconvex bodies
10E15 Products of linear forms
10E20 Minima of forms [See also 10C25.]
10E25 Quadratic forms (reduction, extreme forms, etc.) [See also 10C05.]
10E30 Lattice packing and covering [See also 05B40, 52A45.]
10E35 Mean value theorems
10E40 Transfer theorems
10E45 Automorphism groups of lattices [See also 10C30.]
10E99 None of the above, but in this section

10Fxx Diophantine approximation [See also 10K15.]
10F05 Approximation to one number
10F10 Simultaneous approximation
10F15 Nonhomogeneous approximation
10F20 Continued fractions and generalizations [See also 10A32, 10K10.]
10F25 Approximation to algebraic numbers
10F30 Approximation by numbers from a fixed field
10F35 Irrationality and transcendence
10F37 Independence results
10F40 Distribution modulo one [See also 10K05.]
10F45 Approximation in non-Archimedean valuations
10F99 None of the above, but in this section

10Gxx Trigonometric sums, exponential sums and character sums
10G05 Exponential sums
10G10 Estimates on exponential sums
10G15 Character sums
10G20 Estimates on character sums
10G99 None of the above, but in this section

10Hxx Multiplicative theory
10H05 Riemann's zeta function, functional equation
10H08 Dirichlet *L*-function, functional equation
10H10 Other zeta functions {For local and global ground fields, see 12A70, 12A80, 12B30, 12B35; for algebro-geometric methods, see 14G10; see also 10C15, 10D40.}
10H15 Distribution of primes and of integers with specified multiplicative properties
10H20 Distribution in progressions and other sequences [See also 10L20.]
10H22 Turán theory
10H25 Asymptotic results on arithmetic functions
10H26 Asymptotic results on counting functions for algebraic and topological structures
10H30 Sieves, upper and lower estimates
10H32 Applications of sieve methods
10H35 Distribution of residue classes (primitive roots, power residues, etc.)
10H40 Generalized primes and integers
10H45 Almost-periodic number-theoretic functions [See also 10K35.]
10H99 None of the above, but in this section

10Jxx Additive theory
10J05 Sums of squares
10J06 Sums of higher powers
10J10 Applications of Hardy-Littlewood method [See also 10B35.]
10J15 Additive questions involving primes
10J20 Analytic work on partitions [See also 10A45.]
10J25 Lattice points in large regions
10J99 None of the above, but in this section

10Kxx Probabilistic theory; measure, dimension, etc.
10K05 Distribution modulo one [See also 10F40.]
10K10 Algorithms and expansions [See also 10A30, 10F20.]
10K15 Diophantine approximation [See also 10Fxx.]
10K20 Arithmetic functions
10K25 Normal numbers
10K30 Irregularities of distribution
10K35 Harmonic analysis and almost periodicity [See also 10H45.]
10K40 Non-Archimedean theory
10K50 Measure; Hausdorff dimension
10K99 None of the above, but in this section

10Lxx Sequences of integers
10L02 Density of sum sets, analogues and generalizations
10L05 Addition of sequences, additive bases [See also 05B10.]
10L10 Special sequences (density, multiplicative, additive and other properties)
10L15 Representation functions
10L20 Arithmetic progressions [See also 10H20.]
10L99 None of the above, but in this section

10Mxx Rational arithmetic of algebraic objects
10M05 Polynomials [See also 13F20.]
10M10 Valued fields [See also 12J10.]
10M15 Ordered fields [See also 12J15.]
10M20 Matrices [See also 15A36.]
10M99 None of the above, but in this section

10Nxx Connections with logic
10N05 Decidability [See also 03B25.]
10N10 Ultraproducts [See also 03C20.]
10N15 Nonstandard arithmetic [See also 03H15.]
10N99 None of the above, but in this section

12–XX ALGEBRAIC NUMBER THEORY, FIELD THEORY AND POLYNOMIALS

12–01 Elementary exposition, textbooks
12–02 Advanced exposition (research surveys, monographs, etc.)
12–03 Historical (must also be assigned at least one classification number from Section 01)
12–04 Explicit machine computation and programs (not the theory of computation or programming)
12–06 Proceedings, conferences, etc.

12Axx Algebraic number theory: global fields {For complex multiplication, see 10D25.}
12A05 Analogues in number fields of elementary number theory
12A10 Characterizations of algebraic numbers and algebraic functions
12A15 Special algebraic numbers (PV numbers, etc.)
12A20 Polynomials (irreducibility, etc.)
12A25 Quadratic fields
12A30 Cubic and quartic fields
12A35 Abelian and metabelian extensions (including cyclotomic, Kummer, cyclic)
12A40 Other number fields
12A45 Units and factorization
12A50 Class number, discriminant
12A55 Galois theory
12A57 Integral representations related to algebraic numbers [See also 20C10.]
12A60 Galois cohomology [See also 12Gxx, 16A16.]
12A62 Applications of algebraic *K*-theory
12A65 Class field theory
12A67 Langlands-Weil conjectures, nonabelian class field theory [See also 10Dxx, 22E55.]
12A70 Zeta functions of number fields and generalizations [See also 10H08, 10H10.]
12A75 Density theorems
12A80 Arithmetic of algebras [See also 12B35, 16A18, 16A39.]
12A82 Zeta functions of algebras
12A85 Analysis in adèle rings and groups
12A90 Arithmetic theory of algebraic function fields [See also 14–XX.]
12A95 Totally real and totally positive fields
12A99 None of the above, but in this section

12Bxx Algebraic number theory: local and *p*-adic fields
12B05 Polynomials
12B10 Ramification and extension theory
12B15 Galois theory
12B17 Integral representations
12B20 Galois cohomology [See also 12Gxx, 16A16.]
12B22 Applications of algebraic *K*-theory
12B25 Class field theory
12B27 Langlands-Weil conjectures, nonabelian class field theory [See also 10Dxx, 22E50.]
12B30 Zeta and *L*-functions [See also 10H08, 10H10.]
12B35 Arithmetic of algebras [See also 12A80, 16A18, 16A39.]
12B37 Zeta functions of algebras
12B40 Other analytic theory
12B45 Other nonanalytic theory
12B99 None of the above, but in this section

12Cxx Finite fields, and finite commutative rings (number-theoretic aspects)
12C05 Polynomials
12C10 Linear sequences
12C15 Arithmetic
12C20 Cyclotomy
12C25 Exponential sums
12C30 Structure theory
12C99 None of the above, but in this section

12Dxx Real and complex fields
12D05 Polynomials: factorization
12D10 Polynomials: location of zeros (algebraic theorems) {For the analytic theory, see 26C10, 30C15.}
12D15 Formally real fields
12D99 None of the above, but in this section

12Exx General field theory
12E05 Polynomials (irreducibility, etc.)
12E10 Special polynomials
12E12 Equations
12E15 Skew fields, division rings [See also 12A80, 12B35, 16A39.]
12E99 None of the above, but in this section

12Fxx Field extensions
12F05 Algebraic extensions
12F10 Separable extensions, Galois theory
12F15 Inseparable extensions, derivations
12F20 Transcendental extensions
12F99 None of the above, but in this section

12Gxx Homological methods
12G05 Galois cohomology [See also 12A60, 12B20, 13A20, 16A16.]
12G10 Cohomological dimension
12G99 None of the above, but in this section

12Hxx Differential and difference algebra
12H05 Differential algebra [See also 13N05.]
12H10 Difference algebra [See also 39Axx.]
12H20 Abstract differential equations [See also 34Gxx.]
12H25 *p*-adic differential equations [See also 12B40, 14G20, 34Gxx.]
12H99 None of the above, but in this section

12Jxx Topological fields
12J05 Normed fields
12J10 Valued fields [See also 10M10.]
12J15 Ordered fields [See also 10M15.]
12J17 Topological semi-fields
12J20 General valuation theory
12J25 Non-Archimedean valued fields [See also 26E30, 30G05, 32D25, 46P05.]
12J27 Krasner-Tate algebras [See mainly 32E27, also 46P05.]
12J99 None of the above, but in this section

12Kxx Generalizations
12K05 Near-fields [See also 16A76.]
12K10 Semi-fields [See also 16A78.]
12K99 None of the above, but in this section

12Lxx Connections with logic
12L05 Decidability
12L10 Ultraproducts
12L15 Nonstandard arithmetic [See also 03H15.]
12L99 None of the above, but in this section

13–XX COMMUTATIVE RINGS AND ALGEBRAS {For the noncommutative case, see 16–XX.}

13–01 Elementary exposition, textbooks
13–02 Advanced exposition (research surveys, monographs, etc.)
13–03 Historical (must also be assigned at least one classification number from Section 01)
13–04 Explicit machine computation and programs (not the theory of computation or programming)
13–06 Proceedings, conferences, etc.

13Axx General commutative ring theory
13A05 Divisibility
13A10 Radical theory
13A15 Ideals
13A17 Prime and primary ideals and their generalizations
13A18 Valuations and their generalizations
13A20 Brauer groups [See also 12Gxx, 16A16.]
13A99 None of the above, but in this section

13Bxx Ring extensions and related topics
13B02 Extension theory
13B05 Galois theory
13B10 Automorphisms and derivations
13B15 Ramification theory
13B20 Integral dependence; integral closure; integrally closed

rings, related rings (Japanese, etc.)
13B25 Polynomials over commutative rings
13B30 Quotients and localization
13B99 None of the above, but in this section

13Cxx Theory of modules and ideals
13C05 Structure, classification theorems
13C10 Projective and free modules and ideals [See also 18G05.]
13C11 Injective and flat modules and ideals [See also 18G05.]
13C12 Torsion modules and ideals
13C13 Other special types
13C15 Dimension theory, depth, related rings (catenary, etc.)
13C99 None of the above, but in this section

13Dxx Homological methods
13D03 Cohomology of commutative rings and algebras
13D05 Homological dimension
13D10 Deformations and infinitesimal methods [See also 14D15, 16A58, 32Gxx.]
13D15 Grothendieck group, K-theory [See also 14F15, 18F25, 18F30.]
13D25 Complexes [See also 14Mxx.]
13D30 Torsion theory [See also 13C12, 16A63, 18E40.]
13D99 None of the above, but in this section

13Exx Chain conditions, finiteness conditions
13E05 Noetherian rings and modules
13E10 Artinian rings and modules, finite-dimensional algebras
13E15 Rings and modules of finite generation or representation
13E99 None of the above, but in this section

13Fxx Arithmetic rings [See also 12–XX.]
13F05 Dedekind and Prüfer rings and their generalizations
13F07 Euclidean rings and generalizations
13F10 Principal ideal rings
13F15 Factorial rings, unique factorization domains
13F20 Polynomial rings [See also 10M05.]
13F25 Formal power series rings
13F30 Discrete valuation rings
13F99 None of the above, but in this section

13G05 Integral domains

13Hxx Local rings and semilocal rings
13H05 Regular local rings
13H10 Special types (Macaulay, Gorenstein, etc.)
13H15 Multiplicity theory and related topics
13H99 None of the above, but in this section

13Jxx Topological rings [See also 16A80.]
13J05 Power series rings
13J10 Complete rings
13J15 Henselian rings
13J20 Global topological rings
13J25 Ordered rings [See also 06F25, 16A86.]
13J99 None of the above, but in this section

13K05 Witt vectors and related rings

13L05 Applications of logic to commutative algebra [See also 03Cxx, 03Hxx.]

13Mxx Finite commutative rings {For number-theoretic aspects, see 12Cxx.}
13M05 Structure
13M10 Polynomials
13M99 None of the above, but in this section

13N05 Differential algebra [See also 12H05.]

14–XX ALGEBRAIC GEOMETRY

14–01 Elementary exposition, textbooks
14–02 Advanced exposition (research surveys, monographs, etc.)
14–03 Historical (must also be assigned at least one classification number from Section 01)
14–04 Explicit machine computation and programs (not the theory of computation or programming)
14–06 Proceedings, conferences, etc.

14Axx Foundations
14A05 Relevant commutative algebra [See also 13–XX.]
14A10 Varieties
14A15 Schemes
14A20 Generalizations (algebraic spaces, motifs)
14A25 Elementary questions
14A99 None of the above, but in this section

14Bxx Local theory [See also 32Bxx.]
14B05 Singularities [See also 14E15, 32B30, 32C40, 58C27.]
14B07 Deformations of singularities [See also 14D15, 32C40, 32G05, 32G11, 32G13.]
14B10 Infinitesimal methods
14B12 Local deformation theory, Artin approximation, etc.
14B15 Local cohomology [See also 32C36.]
14B20 Formal neighborhoods
14B25 Local structure of maps: étale, flat, etc. [See also 13–XX, 14E40.]
14B99 None of the above, but in this section

14Cxx Cycles and subschemes
14C05 Parametrization (Chow and Hilbert schemes)
14C10 Equivalence relations
14C15 Rational equivalence rings
14C17 Intersection theory
14C20 Divisors, linear systems
14C21 Webs, nets [See also 53A60.]
14C22 Picard groups
14C25 Zero-cycles
14C30 Transcendental methods, Hodge theory [See also 32J25.]
14C35 Applications of methods of algebraic K-theory [See also 14F05, 18F25.]
14C40 Riemann-Roch theorems [See also 14F12.]
14C99 None of the above, but in this section

14Dxx Families, fibrations
14D05 Structure of families (Picard-Lefschetz, Picard-Fuchs theory, etc.)
14D10 Arithmetic ground fields (finite, local, global)
14D15 Formal methods; deformations [See also 13D10, 14B07, 16A58, 32Gxx.]
14D20 Algebraic moduli problems {For analytic moduli problems, see 32G13.}
14D22 Fine structure of moduli spaces
14D25 Geometric invariants [See also 14L30.]
14D99 None of the above, but in this section

14Exx Mappings and correspondences
14E05 Rational maps, birational correspondences
14E07 Structure of Cremona group and generalizations
14E10 General correspondences
14E15 Global theory of singularities, resolution [See also 14B05, 32C45.]
14E20 Coverings, fundamental group
14E22 Ramification problems [See also 12B10.]
14E25 Imbeddings
14E30 Minimal models
14E35 Results in dimension $\leqslant 3$
14E40 Local structure of maps: étale, flat, etc. [See also 13–XX, 14B25.]
14E99 None of the above, but in this section

14Fxx Cohomology theory [See also 13Dxx.]
14F05 Vector bundles, sheaves, related constructions [See also 18F20, 46M20.]
14F07 Weierstrass points in one and several variables; gap sheaves
14F10 Differentials and other special sheaves
14F12 Riemann-Roch problems [See mainly 14C40, also 32L10, 57R20.]
14F15 Serre cohomology, K-theory [See also 13D15, 18F25.]
14F20 Grothendieck cohomology and topology [See also 18F10.]
14F25 Classical real and complex cohomology
14F30 p-adic cohomology, crystalline cohomology
14F35 Homotopy theory
14F40 de Rham cohomology [See also 14C30, 32C35, 32L10.]
14F45 Topological properties
14F99 None of the above, but in this section

14Gxx Special ground fields, arithmetic problems {For complex multiplication, see 10D25, 14K22. For automorphic and modular functions and forms, see also 10Dxx, 14K15.}
14G05 Rationality questions

14G10 Zeta functions and related questions [See also 12A70, 12B30.]
14G13 Weil-Tate conjectures [See also 14Cxx.]
14G15 Finite ground fields
14G20 *p*-adic ground fields (local fields)
14G25 Global ground fields
14G30 Real ground fields [See also 32C05. Must also be assigned at least one other number referring to the specific type of problem considered.]
14G99 None of the above, but in this section

14Hxx Curves
14H05 Algebraic functions [See also 14K20, 32G20.]
14H10 Families, moduli (algebraic)
14H15 Families, moduli (analytic) [See also 30F10, 32G15, 32G20.]
14H20 Singularities, local rings [See also 13Hxx.]
14H25 Arithmetic ground fields [See also 10Bxx, 14Gxx.]
14H30 Coverings, fundamental group
14H35 Correspondences [See also 14Exx.]
14H40 Jacobians [See also 32G20.]
14H45 Special curves
14H99 None of the above, but in this section

14Jxx Surfaces and higher-dimensional varieties
14J05 Picard group
14J10 Families, moduli, classification: algebraic theory
14J15 Moduli, classification: analytic theory [See also 32J15.]
14J17 Singularities of surfaces
14J20 Arithmetic ground fields [See also 10Bxx, 14Gxx.]
14J25 Special surfaces
14J30 Special 3-folds [See also 14E05.]
14J35 Special 4-folds [See also 14E05.]
14J40 Special *n*-folds
14J99 None of the above, but in this section

14Kxx Abelian varieties and schemes
14K05 Algebraic theory
14K07 Elliptic curves, one-dimensional theory
14K10 Algebraic moduli, classification
14K15 Arithmetic ground fields [See also 10Bxx, 10Dxx, 14Gxx.]
14K20 Analytic theory; abelian integrals and differentials
14K22 Complex multiplication [See also 10D25.]
14K25 Theta functions
14K30 Picard schemes, higher Jacobians
14K99 None of the above, but in this section

14Lxx Group schemes {For linear algebraic groups, see 20Gxx. For Lie algebras, see 17B45.}
14L05 Formal groups, *p*-divisible groups [See also 17B50.]
14L10 Group varieties
14L15 Group schemes
14L17 Affine algebraic groups, hyperalgebra constructions [See also 17B45, 18D35.]
14L20 Finite group schemes
14L25 Pro-algebraic group schemes
14L30 Group actions on varieties or schemes [See also 14D25.]
14L35 Classical groups (geometric aspects)
14L40 Other algebraic groups (geometric aspects)
14L99 None of the above, but in this section

14Mxx Special varieties
14M05 Varieties defined by ring conditions (factorial, Macaulay)
14M07 Low-codimension problems [See also 14Cxx.]
14M10 Complete intersections
14M12 Determinantal varieties
14M15 Grassmannians, Schubert varieties [See also 51M35.]
14M17 Homogeneous spaces [See also 32M10, 53C30, 57T15.]
14M20 Rational varieties
14M99 None of the above, but in this section

14Nxx Classical methods and problems [See also 51–XX.]
14N05 Projective techniques
14N10 Enumerative problems
14N99 None of the above, but in this section

15–XX LINEAR AND MULTILINEAR ALGEBRA; MATRIX THEORY (finite and infinite)

15–01 Elementary exposition, textbooks
15–02 Advanced exposition (research surveys, monographs, etc.)
15–03 Historical (must also be assigned at least one classification number from Section 01)
15–04 Explicit machine computation and programs (not the theory of computation or programming)
15–06 Proceedings, conferences, etc.
15A03 Vector spaces, linear dependence, rank
15A04 Linear transformations, semilinear transformations
15A06 Linear equations
15A09 Matrix inversion, generalized inverses
15A12 Conditioning of matrices [See also 65F35.]
15A15 Determinants, permanents, other special matrix functions
15A18 Eigenvalues, singular values, and eigenvectors
15A21 Canonical forms, reductions, classification
15A23 Factorization of matrices
15A24 Matrix equations and identities
15A27 Commutativity
15A30 Algebraic systems of matrices [See also 16A42, 20Gxx, 20Hxx.]
15A33 Matrices over special rings (quaternions, finite fields, etc.)
15A36 Matrices of integers [See also 10M20.]
15A39 Linear inequalities
15A42 Inequalities involving eigenvalues and eigenvectors
15A45 Miscellaneous inequalities involving matrices
15A48 Positive matrices and their generalizations
15A51 Stochastic matrices
15A52 Random matrices
15A54 Matrices over function rings in one or more variables
15A57 Other types of matrices (Hermitian, skew-Hermitian, etc.)
15A60 Norms of matrices, numerical range, applications of functional analysis to matrix theory [See also 65F35, 65J05.]
15A63 Quadratic and bilinear forms, inner products [See mainly 10Cxx.]
15A66 Clifford algebras
15A69 Multilinear algebra, tensor products
15A72 Vector and tensor algebra, theory of invariants
15A75 Exterior algebra, Grassmann algebras
15A78 Other algebras built from modules
15A90 Applications to physics
15A99 Miscellaneous topics

16–XX ASSOCIATIVE RINGS AND ALGEBRAS {For the commutative case, see 13–XX.}

16–01 Elementary exposition, textbooks
16–02 Advanced exposition (research surveys, monographs, etc.)
16–03 Historical (must also be assigned at least one classification number from Section 01)
16–04 Explicit machine computation and programs (not the theory of computation or programming)
16–06 Proceedings, conferences, etc.
16A02 Integral domains, unique factorization domains (noncommutative)
16A03 Graded algebras, rings and modules
16A04 Noncommutative principal ideal rings, rings with a division algorithm
16A05 Skew polynomial rings, power series rings
16A06 Free algebras, free ideal rings (firs) and their generalizations [See also tensor algebra in 15A72.]
16A08 Rings of quotients, noncommutative localization
16A10 Noncommutative local rings
16A12 Prime and semiprime rings
16A14 Noncommutative analogues of Dedekind and Prüfer domains
16A15 Other generalizations of commutative rings {For commutativity theorems, see 16A70.}
16A16 Separable algebras, Azumaya algebras and their generalizations [See also 12Gxx, 13A20.]
16A18 Orders, arithmetic in algebras [See also 12A80, 12B35.]
16A19 Simple non-Artinian rings
16A20 Primitive and semiprimitive rings
16A21 Radical theory
16A22 Nil, nilpotent and radical rings
16A24 Hopf algebras, algebraic theory [See also 57T05.]
16A25 Structure of groups of units of rings
16A26 Group rings of finite groups [See also 20C05; for semigroup

rings, see 20M25.]
16A27 Group rings of infinite groups [See also 20C07; for semigroup rings, see 20M25.]
16A28 Rings with involution [See also 46Kxx.]
16A30 von Neumann regular rings and their generalizations [See also 06Cxx, 06Exx.]
16A32 Idempotents in rings [See also 06Exx.]
16A33 Noetherian rings
16A34 Rings with annihilator conditions, chain conditions (Goldie rings)
16A35 Artinian rings
16A36 Frobenius algebras, quasi-Frobenius rings and their generalizations
16A38 Rings with polynomial identity
16A39 Skew fields [See also 12E15.], division rings
16A40 Simple and semisimple Artinian rings
16A42 Rings of linear transformations, matrix rings, infinite matrix rings [See also 15A30.]
16A44 Finite rings [See also 12Cxx, 13Mxx.]
16A45 Other types of rings and algebras
16A46 Finite-dimensional algebras
16A48 Structure, classification
16A49 Duality theory
16A50 Projective and flat modules and generalizations
16A51 Perfect, semiperfect rings and modules and their generalizations
16A52 Injective modules, self-injective rings and generalizations
16A53 Special types of modules
16A54 Grothendieck groups of rings, *K*-theory of noncommuta tive rings [See also 18F25, 18F30.]
16A55 Dimension theory (Krull, Gabriel)
16A56 Extension theory
16A58 Deformation theory of rings and algebras [See also 13D10, 14D15, 32Gxx.]
16A60 Homological dimension
16A61 Cohomology of algebras and rings
16A62 Homological methods
16A63 Torsion theories [See also 13D30, 18E40.]
16A64 Modules and representations
16A65 Endomorphism rings
16A66 Ideal theory, prime ideals and their generalizations
16A68 Lie, Jordan and other nonassociative structures on associative rings
16A70 Commutativity theorems
16A72 Automorphisms, derivations, other morphisms
16A74 Galois theory
16A76 Near-rings [See also 12K05.]
16A78 Semirings and other generalizations of rings
16A80 Topological rings and modules [See also 13Jxx.]
16A86 Ordered rings [See also 06F25.]
16A89 Equivalence of module categories
16A90 Categorical methods and categorical ring theory
16A99 Miscellaneous topics

17–XX NONASSOCIATIVE RINGS AND ALGEBRAS

17–01 Elementary exposition, textbooks
17–02 Advanced exposition (research surveys, monographs, etc.)
17–03 Historical (must also be assigned at least one classification number from Section 01)
17–04 Explicit machine computation and programs (not the theory of computation or programming)
17–06 Proceedings, conferences, etc.

17Axx General nonassociative rings
17A01 General theory
17A05 Power-associative
17A10 Commutative power-associative
17A15 Noncommutative Jordan algebras
17A20 Flexible algebras
17A25 Nodal algebras
17A30 Algebras satisfying other identities
17A35 Division algebras
17A36 Automorphisms, derivations, other operators
17A40 Ternary compositions
17A42 Other *n*-ary compositions
17A45 Quadratic algebras (not quadratic Jordan algebras)
17A50 Free algebras
17A60 Structure theory in general nonassociative rings
17A65 Radical theory in general nonassociative rings
17A70 Superalgebras
17A75 Composition algebras
17A99 None of the above, but in this section

17Bxx Lie algebras {For Lie groups, see 22Exx.}
17B05 Structure theory
17B10 Representations, algebraic theory (weights)
17B15 Representations, analytic theory
17B20 Simple, semisimple, reductive algebras (roots)
17B25 Exceptional algebras
17B30 Solvable, nilpotent algebras
17B35 Universal enveloping algebras, imbeddings
17B40 Automorphisms, derivations, other operators
17B45 Lie algebras of linear algebraic groups [See also 14Lxx and 20Gxx.]
17B50 Modular Lie algebras
17B55 Homological methods in Lie algebras
17B56 Cohomology of Lie algebras
17B60 Lie rings associated with other structures (associative, Jordan, etc.) [See also 15A30, 16A68, 17C40, 17C50.]
17B65 Infinite-dimensional Lie algebras [See also 22E65.]
17B70 Graded Lie algebras
17B99 None of the above, but in this section

17Cxx Jordan algebras (commutative)
17C05 Identities
17C10 Structure theory
17C15 Representations
17C20 Simple, semisimple algebras
17C25 Universal enveloping algebras
17C30 Automorphisms, derivations, other operators
17C35 Formally real domains of positivity [See also 32Nxx.]
17C40 Exceptional Jordan algebras and associated Lie groups
17C45 Homological methods in Jordan algebras
17C46 Cohomology of Jordan algebras
17C50 Jordan rings associated with other structures [See also 16A68, 17B60.]
17C65 Infinite-dimensional Jordan algebras
17C99 None of the above, but in this section

17Dxx Other nonassociative rings and algebras
17D05 Alternative rings
17D10 Mal'cev rings
17D15 Right alternative rings
17D20 (γ,δ)-rings
17D25 Lie admissible algebras
17D92 Genetic algebras
17D99 None of the above, but in this section

18–XX CATEGORY THEORY, HOMOLOGICAL ALGEBRA

18–01 Elementary exposition, textbooks
18–02 Advanced exposition (research surveys, monographs, etc.)
18–03 Historical (must also be assigned at least one classification number from Section 01)
18–04 Explicit machine computation and programs (not the theory of computation or programming)
18–06 Proceedings, conferences, etc.

18Axx General theory of categories and functors
18A05 Definitions, generalizations
18A10 Graphs, diagram schemes, precategories, neocategories [See also 20Lxx.]
18A15 Foundations, relations to logic and deductive systems [See also 03–XX.]
18A20 Epimorphisms, monomorphisms, special classes of morphisms, null morphisms, factorization (bicategories)
18A22 Special properties of functors (faithful, full, etc.)
18A23 Natural morphisms, dinatural morphisms
18A25 Functor categories, comma categories
18A30 Limits and colimits (products, sums, directed limits, pushouts, fiber products, equalizers, kernels, ends and coends, etc.)
18A32 Factorization of morphisms (via images, coimages,

dominions, codominions), substructures, quotient structures, congruences, amalgams
18A35 Categories admitting limits (complete categories), functors commuting with limits, continuous functors, completions
18A40 Adjoint functors (representable functors, universal constructions, reflective subcategories, reflections, etc.), constructions of adjoints (Kan extensions, etc.)
18A99 None of the above, but in this section

18Bxx Special categories
18B05 Category of sets, characterizations [See also 03–XX.]
18B10 Category of relations, additive relations
18B15 Imbedding theorems, universal categories [See also 18E20.]
18B20 Categories of machines, automata, operative categories [See also 03D05, 68Dxx, 68F10.]
18B25 Topoi [See also 03G25.]
18B30 Categories of topological spaces and continuous mappings [See also 54–XX.]
18B35 Preorders, orders and lattices (viewed as categories) [See also 06–XX.]
18B40 Groupoids, semigroupoids, semigroups, groups (viewed as categories) [See also 20Axx, 20Lxx, 20Mxx.]
18B99 None of the above, but in this section

18Cxx Categories and algebraic theories
18C05 Equational categories [See also 03–XX, 08C05.]
18C10 Theories (e.g. algebraic theories), structure, and semantics [See also 03–XX.]
18C15 Triples (= standard construction, monad or triad), algebras for a triple, homology and derived functors for triples [See also 18Gxx.]
18C20 Algebras and Kleisli categories associated with monads
18C99 None of the above, but in this section

18Dxx Categories with structure
18D05 Double categories, 2-categories, bicategories, hypercategories
18D10 Monoidal categories (= multiplicative categories)
18D15 Closed categories (closed monoidal and Cartesian closed categories, etc.)
18D20 Enriched categories (over closed or monoidal categories)
18D25 Strong functors, strong adjunctions
18D30 Fibered categories
18D35 Structured objects in a category (group objects, etc.)
18D99 None of the above, but in this section

18Exx Abelian categories
18E05 Preadditive, additive categories
18E10 Exact categories, abelian categories
18E15 Grothendieck categories
18E20 Imbedding theorems [See also 18B15.]
18E25 Derived functors and satellites
18E30 Derived categories, triangulated categories
18E35 Localization of categories
18E40 Torsion theories, radicals [See also 13D30, 16A63.]
18E99 None of the above, but in this section

18Fxx Categories and geometry
18F05 Local categories and functors
18F10 Grothendieck topologies [See also 14F20.]
18F15 Abstract manifolds and fiber bundles [See also 55Rxx, 57Pxx.]
18F20 Presheaves and sheaves [See also 14F05, 32C35, 32L10, 54B40, 55N30.]
18F25 Algebraic K-theory and L-theory [See also 10Cxx, 12–XX, 13D15, 14Cxx, 16A54, 57R65, 57R67.]
18F30 Grothendieck groups [See also 13D15, 16A54.]
18F99 None of the above, but in this section

18Gxx Homological algebra [See also 55Uxx.]
18G05 Projectives and injectives [See also 13C10, 13C11, 16A50, 16A52.]
18G10 Resolutions; derived functors [See also 18E25.]
18G15 Ext and Tor, generalizations, Künneth formula [See also 55U25.]
18G20 Homological dimension [See also 13Dxx, 16A60, 16A62.]
18G25 Relative homological algebra, projective classes
18G30 Simplicial sets, simplicial objects (in a category) [See also 55U10.]
18G35 Chain complexes [See also 18E30, 55U15.]
18G40 Spectral sequences, hypercohomology [See also 55Txx.]
18G50 Nonabelian homological algebra
18G55 Nonabelian homotopical algebra
18G99 None of the above, but in this section

20–XX GROUP THEORY AND GENERALIZATIONS

20–01 Elementary exposition, textbooks
20–02 Advanced exposition (research surveys, monographs, etc.)
20–03 Historical (must also be assigned at least one classification number from Section 01)
20–04 Explicit machine computation and programs (not the theory of computation or programming)
20–06 Proceedings, conferences, etc.

20Axx Foundations
20A05 Axiomatics and elementary properties
20A10 Metamathematical considerations {For word problems, see 20F10.}
20A15 Applications of logic to group theory
20A99 None of the above, but in this section

20Bxx Permutation groups
20B05 General theory for finite groups
20B07 General theory for infinite groups
20B10 Characterization theorems
20B15 Uniprimitive groups
20B20 Multiply transitive finite groups
20B22 Multiply transitive infinite groups
20B25 Finite automorphism groups of algebraic, geometric, or combinatorial structures [See also 05Bxx, 12F10, 20G40, 20H30, 51–XX.]
20B27 Infinite automorphism groups [See also 12F10.]
20B30 Symmetric groups, general
20B35 Subgroups of symmetric groups
20B99 None of the above, but in this section

20Cxx Representation theory of groups
20C05 Group rings of finite groups and their modules [See also 16A26.]
20C07 Group rings of infinite groups and their modules [See also 16A27.]
20C10 Integral representations of finite groups
20C11 p-adic representations of finite groups
20C12 Integral representations of infinite groups
20C15 Ordinary representations and characters
20C20 Modular representations and characters
20C25 Projective representations and multipliers
20C30 Representations of finite symmetric groups and other special finite groups
20C32 Representations of infinite symmetric groups and other special infinite groups
20C35 Applications to physics
20C99 None of the above, but in this section

20Dxx Abstract finite groups
20D05 Classification of simple and nonsolvable groups
20D06 Simple groups: alternating and classical groups [See also 20Gxx, 22Exx.]
20D08 Simple groups: sporadic groups
20D10 Solvable groups, theory of formations, π-length, ranks, factorable groups, p-groups [See also 20F17.]
20D15 Nilpotent groups, p-groups
20D20 Sylow subgroups, Sylow properties, π-groups, π-structure
20D25 Special subgroups (Frattini, Fitting, etc.)
20D30 Series and lattices of subgroups
20D35 Subnormal subgroups
20D40 Products of subgroups
20D45 Automorphisms
20D50 Covering of subgroups
20D60 Arithmetic and combinatorial problems
20D99 None of the above, but in this section

20Exx Structure and classification of infinite or finite groups
20E05 Free nonabelian groups
20E06 Free products, free products with amalgamation, Higman-Neumann-Neumann extensions, and generalizations

20E07 Subgroup theorems
20E10 Varieties of groups
20E15 Chains and lattices of subgroups, subnormal subgroups [See also 20F22.]
20E18 Limits, profinite groups
20E22 Extensions, wreath products, and other compositions
20E25 Local properties
20E26 Residual properties and generalizations
20E28 Maximal subgroups, minimal subgroups
20E32 Simple groups [See also 20D05.]
20E34 General structure theorems
20E36 General theorems concerning automorphisms of groups
20E99 None of the above, but in this section

20Fxx Special aspects of infinite or finite groups
20F05 Generators, relations, and presentations
20F06 Cancellation theory
20F10 Word problems, other decision problems, connections with logic and automata [See also 03D05, 03D40, 06B25, 08A50, 68Dxx, 68F10.]
20F12 Commutator calculus
20F14 Derived series, central series, and generalizations
20F16 Solvable groups, supersolvable groups
20F17 Formations of groups [See also 20D10.]
20F18 Nilpotent groups
20F19 Generalizations of solvable and nilpotent groups
20F22 Other classes of groups defined by subgroup chains
20F24 FC-groups and their generalizations
20F26 Special subgroups
20F28 Automorphism groups of groups [See also 20E36.]
20F29 Representations of groups as automorphism groups of algebraic systems
20F32 Geometric group theory [See also 05C25, 20Exx, 20Gxx.]
20F34 Fundamental groups and their automorphisms [See also 57M05, 57Sxx.]
20F36 Braid groups
20F38 Other groups related to topology or analysis
20F40 Associated Lie structures
20F45 Engel conditions
20F50 Periodic groups
20F60 Ordered groups [See mainly 06F15.]
20F99 None of the above, but in this section

20Gxx Linear algebraic groups (classical groups) {For arithmetic theory, see 10C30, 10E45; for geometric theory, see 14Lxx, 22Exx; for other methods in representation theory, see 22E45, 22E46, 22E47, 22E50, 22E55.}
20G05 Representation theory
20G10 Cohomology theory
20G15 Linear algebraic groups over arbitrary fields
20G20 Linear algebraic groups over the reals, the complexes, the quaternions
20G25 Linear algebraic groups over local fields and their integers
20G30 Linear algebraic groups over global fields and their integers
20G35 Linear algebraic groups over adèles and other rings and schemes
20G40 Linear algebraic groups over finite fields
20G45 Applications to physics; explicit representations
20G99 None of the above, but in this section

20Hxx Other groups of matrices
20H05 Unimodular groups, congruence subgroups [See also 10D07, 22E40, 51F20.]
20H10 Fuchsian groups and their generalizations [See also 10D07, 22E40, 30F35, 32Nxx.]
20H15 Other geometric groups, including crystallographic groups [See also 51–XX, especially 51F15, and 82A60.]
20H20 Other matrix groups over fields
20H25 Other matrix groups over rings
20H30 Other matrix groups over finite fields
20H99 None of the above, but in this section

20Jxx Connections with homological algebra and category theory
20J05 Homological methods in group theory
20J06 Cohomology of finite groups
20J10 Groups arising as cohomology groups
20J15 Category of groups
20J99 None of the above, but in this section

20Kxx Abelian groups
20K01 Finite abelian groups
20K05 Finitely generated groups
20K10 Torsion groups, primary groups and generalized primary groups
20K12 Ulm sequences
20K15 Torsion free groups, finite rank
20K20 Torsion free groups, infinite rank
20K21 Mixed groups
20K25 Direct sums, direct products, etc.
20K26 Indecomposable groups
20K27 Subgroups
20K30 Automorphisms, homomorphisms, endomorphisms, etc.
20K35 Extensions
20K40 Homological and categorical methods
20K45 Topological methods
20K99 None of the above, but in this section

20Lxx Groupoids (small categories in which all morphisms are isomorphisms)
20L05 General theory
20L10 Connections with group theory
20L13 Mappings of groupoids
20L15 Connections with topology
20L17 Connections with category theory
20L99 None of the above, but in this section

20Mxx Semigroups
20M05 Free semigroups, generators and relations, word problem
20M07 Varieties of semigroups
20M10 General structure theory
20M11 Radical theory
20M12 Ideal theory
20M14 Commutative semigroups
20M15 Mappings of semigroups
20M20 Semigroups of transformations, etc. [See also 47D05, 47H20, 54H15.]
20M25 Semigroup rings, multiplicative semigroups of rings
20M30 Representation of semigroups
20M35 Semigroups in automata theory, linguistics, etc. [See also 03D05, 68D30, 68Fxx.]
20M50 Connections with homological algebra and category theory
20M99 None of the above, but in this section

20Nxx Other generalizations of groups
20N05 Loops, quasigroups [See also 05Bxx.]
20N07 Mappings of loops
20N10 Ternary systems (heaps, semiheaps, heapoids, etc.)
20N15 *n*-ary systems
20N99 None of the above, but in this section

20P05 Probability methods in group theory

22–XX TOPOLOGICAL GROUPS, LIE GROUPS {For transformation groups, see 54H15, 57Sxx, 58–XX. For abstract harmonic analysis, see 43–XX.}
22–01 Elementary exposition, textbooks
22–02 Advanced exposition (research surveys, monographs, etc.)
22–03 Historical (must also be assigned at least one classification number from Section 01)
22–04 Explicit machine computation and programs (not the theory of computation or programming)
22–06 Proceedings, conferences, etc.

22Axx Topological algebraic systems {For topological rings and fields, see 12Jxx, 13Jxx, 16A80; for dual spaces of operator algebras and topological groups, see 47D35.}
22A05 Structure of general topological groups
22A10 Analysis on general topological groups
22A15 Structure of topological semigroups
22A20 Analysis on topological semigroups
22A25 Representations of general topological groups and semigroups

22A26 Topological semilattices, lattices and applications [See also 06B30, 06F30.]
22A30 Other topological algebraic systems and their representations
22A99 None of the above, but in this section

22Bxx Locally compact abelian (LCA) groups
22B05 General properties and structure of LCA groups
22B10 Structure of group algebras of LCA groups
22B99 None of the above, but in this section

22C05 Compact groups

22Dxx Locally compact groups and their algebras
22D05 General properties and structure of locally compact groups
22D10 Unitary representations of locally compact groups
22D12 Other representations of locally compact groups
22D15 Group algebras of locally compact groups
22D20 Representations of group algebras
22D25 C^*-algebras and W^*-algebras arising from group representations [See also 46Lxx.]
22D30 Induced representations
22D35 Duality theorems
22D40 Ergodic theory on groups [See also 28Dxx and 43A60.]
22D45 Automorphism groups of locally compact groups
22D99 None of the above, but in this section

22Exx Lie groups {For the topology of Lie groups and homogeneous spaces, see 57Sxx, 57Txx; for analysis thereon, see 43A80, 43A85, 43A90.}
22E05 Local Lie groups [See also 34–XX, 35–XX, 58H05.]
22E10 General properties and structure of complex Lie groups [See also 32M05.]
22E15 General properties and structure of real Lie groups
22E20 General properties and structure of other Lie groups
22E25 Nilpotent and solvable Lie groups
22E27 Representations of nilpotent and solvable Lie groups (special orbital integrals, non-Type I representations, etc.)
22E30 Analysis on real and complex Lie groups [See also 33A75, 43–XX.]
22E35 Analysis on p-adic Lie groups [See also 12A85.]
22E40 Discrete subgroups of Lie groups [See also 20Hxx and 32Nxx.]
22E41 Continuous cohomology [See also 57R32, 57Txx, 58H10.]
22E43 Structure and representation of the Lorentz group
22E45 Representations of Lie and linear algebraic groups over real fields: analytic methods {For the purely algebraic theory, see 20G05.}
22E46 Semi-simple Lie groups and their representations
22E47 Representations of Lie and real algebraic groups: algebraic methods (Verma modules, etc.) [See also 17B35.]
22E50 Representations of Lie and linear algebraic groups over local fields
22E55 Representations of Lie and linear algebraic groups over global fields and adèle rings [See also 20G05.]
22E60 Lie algebras of Lie groups {For the algebraic theory of Lie algebras, see 17Bxx.}
22E65 Infinite-dimensional Lie groups and their Lie algebras [See also 17B65, 58B25, 58H05.]
22E70 Applications of Lie groups to physics; explicit representations [See also 81C40, 81Gxx.]
22E99 None of the above, but in this section

26–XX REAL FUNCTIONS [See also 54C30.]

26–01 Elementary exposition, textbooks
26–02 Advanced exposition (research surveys, monographs, etc.)
26–03 Historical (must also be assigned at least one classification number from Section 01)
26–04 Explicit machine computation and programs (not the theory of computation or programming)
26–06 Proceedings, conferences, etc.

26Axx Functions of one variable
26A03 Foundations: limits and generalizations, elementary topology of the line
26A06 One-variable calculus
26A09 Elementary functions
26A12 Rate of growth of functions, orders of infinity, slowly increasing functions [See also 26A48.]
26A15 Continuity and related questions (modulus of continuity, semicontinuity, discontinuities, etc.) {For properties determined by Fourier coefficients, see 42A16; for those determined by approximation properties, see 41A25.}
26A16 Lipschitz (Hölder) classes
26A18 Iteration [See also 39B10, 47H10, 54H25.]
26A21 Classification of real functions; Baire classification of sets and functions [See also 04A15, 28A05, 54C50.]
26A24 Differentiation (functions of one variable): general theory, generalized derivatives, mean-value theorems [See also 28A15.]
26A27 Nondifferentiability (nondifferentiable functions, points of nondifferentiability), discontinuous derivatives
26A30 Singular functions, Cantor functions, functions with other special properties
26A33 Fractional derivatives and integrals
26A36 Antidifferentiation
26A39 Denjoy and Perron integrals, other special integrals
26A42 Integrals of Riemann, Stieltjes and Lebesgue type [See also 28–XX.]
26A45 Functions of bounded variation, generalizations
26A46 Absolutely continuous functions
26A48 Monotonic functions, generalizations
26A51 Convexity, generalizations
26A99 None of the above, but in this section

26Bxx Functions of several variables
26B05 Continuity and differentiation questions
26B10 Implicit function theorems, Jacobians, transformations with several variables
26B12 Calculus of vector functions
26B15 Integration: length, area, volume [See also 28A75, 51M25.]
26B20 Integral formulas (Stokes, Gauss, Green, etc.)
26B25 Convexity, generalizations
26B30 Absolutely continuous functions, functions of bounded variation
26B35 Special properties of functions of several variables, Hölder conditions, etc.
26B40 Representation and superposition of functions
26B99 None of the above, but in this section

26Cxx Polynomials, rational functions
26C05 Polynomials: analytic properties, inequalities, etc.
26C10 Polynomials: location of zeros [See also 12D10, 30C15, 65H05.]
26C15 Rational functions [See also 14G30.]
26C99 None of the above, but in this section

26Dxx Inequalities {For maximal function inequalities, see 42B25; for functional inequalities, see 39C05.}
26D05 Inequalities for trigonometric functions and polynomials
26D10 Inequalities involving derivatives and differential and integral operators
26D15 Inequalities for sums, series and integrals
26D20 Other analytical inequalities
26D99 None of the above, but in this section

26Exx Miscellaneous topics [See also 58Cxx.]
26E05 Real-analytic functions
26E10 C^∞-functions, quasianalytic functions
26E15 Calculus of functions on infinite-dimensional spaces
26E20 Calculus of functions taking values in infinite-dimensional spaces
26E25 Set-valued functions [See also 54C60.]
26E30 Non-Archimedean analysis [See also 12J25.]
26E35 Nonstandard analysis [See also 03H05.]
26E99 None of the above, but in this section

28–XX MEASURE AND INTEGRATION {For analysis on manifolds, see 58–XX.}

28–01 Elementary exposition, textbooks
28–02 Advanced exposition (research surveys, monographs, etc.)
28–03 Historical (must also be assigned at least one classification number from Section 01)
28–04 Explicit machine computation and programs (not the theory of computation or programming)

28–06 Proceedings, conferences, etc.

28Axx Classical measure theory

28A05 Classes of sets (Borel fields, σ-rings, etc.), measurable sets, Suslin sets, analytic sets [See also 04A15, 26A21, 54H05.]
28A10 Real- or complex-valued set functions
28A12 Contents, measures, outer measures, capacities
28A15 Abstract differentiation theory, differentiation of set functions [See also 26A24.]
28A20 Measurable and nonmeasurable functions, sequences of measurable functions, modes of convergence
28A25 Integration with respect to measures and other set functions
28A33 Spaces of measures, convergence of measures [See also 46E27, 60Bxx.]
28A35 Measures and integrals in product spaces
28A50 Integration and disintegration of measures
28A51 Lifting theory [See also 46G15.]
28A60 Measures on Boolean rings, measure algebras [See also 54H10.]
28A75 Length, area, volume, other geometric measure theory [See also 26B15, 49F20.]
28A99 None of the above, but in this section

28Bxx Measures and integrals with values in abstract spaces

28B05 Vector-valued measures and integrals [See also 46G10.]
28B10 Group- or semigroup-valued measures and integrals
28B15 Measures and integrals with values in general ordered systems
28B20 Set-valued measures; integration of set-valued functions; measurable selections [See also 54C60, 54C65.]
28B99 None of the above, but in this section

28Cxx Measures on spaces with additional structure [See also 46G12, 58C35, 58D20.]

28C05 Integration theory via linear functionals (Radon measures, Daniell integrals, etc.), representing measures
28C10 Measures on topological groups, Haar measures, invariant measures [See also 43A05.]
28C15 Measures on topological spaces (regularity of measures, etc.)
28C20 Measures and integrals in function spaces (Wiener measure, Gauss measure, etc.) [See also 58D20, 60B11.]
28C99 None of the above, but in this section

28Dxx Measure-theoretic ergodic theory [See also 22D40, 47A35, 54H20, 58Fxx, 60Fxx, 60G10.]

28D05 Measure-preserving transformations
28D10 One-parameter continuous families of measure-preserving transformations
28D15 General groups of measure-preserving transformations
28D20 Entropy and other invariants
28D99 None of the above, but in this section

30–XX FUNCTIONS OF A COMPLEX VARIABLE {For analysis on manifolds, see 58–XX.}

30–01 Elementary exposition, textbooks
30–02 Advanced exposition (research surveys, monographs, etc.)
30–03 Historical (must also be assigned at least one classification number from Section 01)
30–04 Explicit machine computation and programs (not the theory of computation or programming)
30–06 Proceedings, conferences, etc.

30Axx General properties

30A05 Monogenic properties of complex functions (including polygenic and areolar monogenic functions)
30A10 Inequalities in the complex domain
30A99 None of the above, but in this section

30Bxx Series expansions

30B10 Power series (including lacunary series)
30B20 Random power series
30B30 Boundary behavior of power series, over-convergence
30B40 Analytic continuation
30B50 Dirichlet series and other series expansions, exponential series [See also 40–XX, 41–XX, 42–XX.]
30B60 Completeness problems, closure of a system of functions
30B70 Continued fractions [See also 10A32, 40A15.]
30B99 None of the above, but in this section

30Cxx Geometric function theory

30C10 Polynomials
30C15 Zeros of polynomials, rational functions, and other analytic functions (e.g. zeros of functions with bounded Dirichlet integral) {For algebraic theory, see 12D10; for real methods, see 26C10.}
30C20 Conformal mappings of special domains
30C25 Covering theorems in conformal mapping theory
30C30 Numerical methods in conformal mapping theory [See also 65E05.]
30C35 General theory of conformal mappings
30C40 Kernel functions and applications
30C45 Special classes of univalent and multivalent functions (star-like, convex, bounded rotation, etc.)
30C50 Coefficient problems for univalent and multivalent functions
30C55 General theory of univalent and multivalent functions
30C60 Quasiconformal mappings
30C70 Extremal problems for conformal and quasiconformal mappings, variational methods
30C75 Extremal problems for conformal and quasiconformal mappings, other methods
30C80 Maximum principle; Schwarz' lemma, Lindelöf principle, analogues and generalizations; subordination
30C85 Capacity and harmonic measure in the complex plane [See also 31A15.]
30C99 None of the above, but in this section

30Dxx Entire and meromorphic functions, and related topics

30D05 Functional equations in the complex domain, iteration and composition of analytic functions [See also 34A20, 39–XX.]
30D10 Representations of entire functions by series and integrals
30D15 Special classes of entire functions and growth estimates
30D20 Entire functions, general theory
30D30 Meromorphic functions, general theory
30D35 Distribution of values, Nevanlinna theory
30D40 Cluster sets, prime ends, boundary behavior
30D45 Normal functions, normal families
30D50 Blaschke products, bounded characteristic, bounded functions, functions with positive real part
30D55 H^p-classes
30D60 Quasianalytic and other classes of functions
30D99 None of the above, but in this section

30Exx Miscellaneous topics of analysis in the complex domain

30E05 Moment problems, interpolation problems
30E10 Approximation in the complex domain
30E15 Asymptotic representations in the complex domain
30E20 Integration, integrals of Cauchy type, integral representations of analytic functions [See also 45Exx.]
30E25 Boundary value problems [See also 45Exx.]
30E99 None of the above, but in this section

30Fxx Riemann surfaces

30F10 Compact Riemann surfaces and uniformization [See also 14H15, 32G15.]
30F15 Harmonic functions on Riemann surfaces
30F20 Classification theory of Riemann surfaces
30F25 Ideal boundary theory
30F30 Differentials on Riemann surfaces
30F35 Fuchsian groups and automorphic functions [See also 10Dxx, 20H10, 32Gxx, 32Nxx.]
30F40 Kleinian groups [See also 20H10.]
30F99 None of the above, but in this section

30Gxx Generalized function theory

30G05 Non-Archimedean function theory [See also 12J25.]
30G10 Nonstandard function theory [See also 03H05.]
30G15 Topological function theory
30G20 Generalizations of Bers or Vekua type (pseudoanalytic, p-analytic, etc.)
30G25 Discrete analytic functions
30G30 Other generalizations of analytic functions (including abstract-valued functions)
30G35 Functions of hypercomplex variables and generalized variables
30G99 None of the above, but in this section

30H05 **Spaces and algebras of analytic functions [See also 32E25, 46Exx, 46J15.]**

31-XX **POTENTIAL THEORY {For probabilistic potential theory, see 60J45.}**

31-01 Elementary exposition, textbooks
31-02 Advanced exposition (research surveys, monographs, etc.)
31-03 Historical (must also be assigned at least one classification number from Section 01)
31-04 Explicit machine computation and programs (not the theory of computation or programming)
31-06 Proceedings, conferences, etc.

31Axx **Two-dimensional theory**

31A05 Harmonic, subharmonic, superharmonic functions
31A10 Integral representations
31A15 Potentials and capacity, harmonic measure, extremal length [See also 30C85.]
31A20 Boundary behavior (theorems of Fatou type, etc.)
31A25 Boundary value and inverse problems
31A30 Biharmonic, polyharmonic functions and equations, Poisson's equation
31A35 Connections with differential equations
31A99 None of the above, but in this section

31Bxx **Higher-dimensional theory**

31B05 Harmonic, subharmonic, superharmonic functions
31B10 Integral representations
31B15 Potentials and capacities, extremal length
31B20 Boundary value and inverse problems
31B25 Boundary behavior
31B30 Biharmonic and polyharmonic equations and functions
31B35 Connections with differential equations
31B99 None of the above, but in this section

31Cxx **Other generalizations**

31C05 Harmonic, subharmonic, superharmonic functions
31C10 Pluriharmonic and plurisubharmonic functions [See also 32F05.]
31C12 Potential theory on Riemannian manifolds [See also 53C20; for Hodge theory, see 58A14.]
31C15 Potentials and capacities
31C20 Discrete potential theory and numerical methods
31C25 Dirichlet spaces
31C35 Martin boundary theory [See also 60J50.]
31C99 None of the above, but in this section

31D05 **Axiomatic potential theory**

32-XX **SEVERAL COMPLEX VARIABLES AND ANALYTIC SPACES {For infinite-dimensional holomorphy, see also 46G20, 58B12.}**

32-01 Elementary exposition, textbooks
32-02 Advanced exposition (research surveys, monographs, etc.)
32-03 Historical (must also be assigned at least one classification number from Section 01)
32-04 Explicit machine computation and programs (not the theory of computation or programming)
32-06 Proceedings, conferences, etc.

32Axx **Holomorphic functions of several complex variables**

32A05 Power series, series of functions
32A07 Special domains (Reinhardt, Hartogs, tube domains, etc.)
32A10 Holomorphic functions
32A15 Entire functions
32A17 Normal families
32A20 Meromorphic functions
32A22 Nevanlinna theory: growth estimates {For geometric theory, see 32H25, 32H30.}
32A25 Integral representation
32A27 Local theory of residues [See also 32C30.]
32A30 Other generalizations of function theory of one complex variable (should also be assigned at least one classification number from Section 30) {For functions of several hypercomplex variables, see 30G35.}
32A35 H^p-spaces [See also 32M15, 42B30, 43A85, 46J15.]
32A40 Boundary behavior
32A45 Hyperfunctions [See also 46F15.]
32A99 None of the above, but in this section

32Bxx **Local analytic geometry [See also 13-XX and 14-XX.]**

32B05 Analytic algebra and generalizations, preparation theorems
32B10 Germs of analytic sets
32B15 Analytic subsets of affine space
32B20 Semi-analytic sets and subanalytic sets
32B25 Triangulation and related questions
32B30 Local singularities [See also 14B05, 32C40, 32C42.]
32B99 None of the above, but in this section

32Cxx **General theory of analytic spaces**

32C05 Real-analytic manifolds, real-analytic spaces [See also 14G30, 58A07.]
32C10 Complex manifolds {For almost complex manifolds, see 53C15.}
32C15 Complex spaces
32C20 Normal analytic spaces
32C25 Analytic subsets and submanifolds
32C30 Integration on analytic sets and spaces, currents {For local theory, see 32A25 or 32A27.}
32C35 Analytic sheaves and cohomology groups [See also 14Fxx, 18F20, 55N30.]
32C36 Local cohomology of analytic spaces
32C37 Duality theorems
32C40 Singularities
32C42 Stratified sets, etc. [See also 32Bxx.]
32C45 Modifications, resolution of singularities [See also 14E15.]
32C99 None of the above, but in this section

32Dxx **Analytic continuation**

32D05 Domains of holomorphy
32D10 Envelopes of holomorphy
32D15 Continuation of analytic objects
32D20 Removable singularities
32D25 Non-Archimedean function theory
32D99 None of the above, but in this section

32Exx **Holomorphic convexity**

32E05 Holomorphically convex complex spaces, reduction theory
32E10 Stein spaces, Stein manifolds
32E15 Runge pairs
32E20 Polynomial convexity
32E25 Algebras of holomorphic functions [See also 30H05, 46J10, 46J15.]
32E27 Krasner-Tate algebras, etc. (algebras of holomorphic functions over non-Archimedean fields)
32E30 Holomorphic and polynomial approximation
32E35 Global boundary behavior of holomorphic functions
32E99 None of the above, but in this section

32Fxx **Geometric convexity**

32F05 Plurisubharmonic functions and generalizations [See also 31C10.]
32F10 q-convexity, q-concavity
32F15 Pseudoconvex domains
32F20 Geometric results on $\bar{\partial}$-Neumann problems [See also 35N15.]
32F25 Real submanifolds in complex manifolds
32F30 Pseudoconvex manifolds
32F99 None of the above, but in this section

32Gxx **Deformations of analytic structures**

32G05 Deformations of complex structures [See also 13D10, 16A58, 58H10, 58H15.]
32G07 Deformations of special (e.g. CR) structures
32G10 Deformations of submanifolds and subspaces
32G11 Deformations of singularities
32G13 Analytic moduli problems {For algebraic moduli problems, see 14D20.}
32G15 Moduli of Riemann surfaces, Teichmüller theory [See also 14H15, 30Fxx.]
32G20 Period matrices [See also 14H05.]
32G99 None of the above, but in this section

32Hxx **Holomorphic mappings**

32H05 Representative domains
32H10 Bergman kernel function
32H15 Invariant metrics and pseudodistances

32H20 Hyperbolic complex manifolds
32H25 Picard type theorems and generalizations {For function-theoretic properties, see 32A22.}
32H30 Value distribution theory in higher dimensions {For function-theoretic properties, see 32A22.}
32H99 None of the above, but in this section

32Jxx Compact analytic spaces {For Riemann surfaces, see 14Hxx, 30Fxx.}
32J05 Compactification
32J10 Algebraic dependence theorems
32J15 Compact surfaces
32J20 Algebraicity criteria
32J25 Transcendental methods of algebraic geometry [See also 14C30.]
32J99 None of the above, but in this section

32Kxx Generalizations of analytic spaces (should also be assigned at least one other classification number in this section)
32K05 Banach analytic spaces [See also 58Bxx.]
32K10 Non-Archimedean analytic spaces
32K15 Differentiable functions on analytic spaces, differentiable spaces [See also 58C25.]
32K99 None of the above, but in this section

32Lxx Holomorphic fiber spaces [See also 55Rxx.]
32L05 Holomorphic fiber bundles and generalizations
32L10 Sheaves and cohomology of sections of holomorphic vector bundles, general results [See also 18F20, 55N30.]
32L15 Bundle convexity [See also 32F10.]
32L20 Vanishing theorems
32L99 None of the above, but in this section

32Mxx Complex spaces with a group of automorphisms
32M05 Complex Lie groups, automorphism groups of complex spaces [See also 22E10.]
32M10 Homogeneous complex manifolds [See also 14M17, 57T15.]
32M15 Hermitian symmetric spaces, bounded symmetric domains [See also 22E10, 22E40, 53C35, 57T15.]
32M99 None of the above, but in this section

32Nxx Automorphic functions [See also 10Dxx, 20H10, 22E40, 30F35.]
32N05 General theory of automorphic functions of several complex variables
32N10 Automorphic forms
32N15 Automorphic functions in symmetric domains
32N99 None of the above, but in this section

33–XX SPECIAL FUNCTIONS {33–XX deals with the properties of functions as functions. General systems of orthogonal functions are treated in 42C05. Expansions in orthogonal functions are treated in 42C10, 42C15.}

33–01 Elementary exposition, textbooks
33–02 Advanced exposition (research surveys, monographs, etc.)
33–03 Historical (must also be assigned at least one classification number from Section 01)
33–04 Explicit machine computation and programs (not the theory of computation or programming)
33–06 Proceedings, conferences, etc.
33A10 Exponential and trigonometric functions
33A15 Gamma and beta functions
33A20 Error function, probability integral
33A25 Elliptic functions and integrals
33A30 Simple hypergeometric functions of one and several variables
33A35 Generalized hypergeometric functions of one and several variables (*E*-functions, *G*-functions, *H*-functions, etc.)
33A40 Cylindrical functions, Bessel functions
33A45 Spherical functions (Legendre polynomials and functions, spherical harmonics), ultraspherical polynomials
33A50 Gegenbauer functions
33A55 Lamé, Mathieu, spheroidal wave functions
33A60 Other wave functions
33A65 Orthogonal special functions and polynomials (Čebyšev, Hermite, Jacobi, Laguerre, etc.)
33A70 Other special functions
33A75 Special functions and Lie groups [See also 22Exx, 43A80.]
33A99 Miscellaneous topics

34–XX ORDINARY DIFFERENTIAL EQUATIONS

34–01 Elementary exposition, textbooks
34–02 Advanced exposition (research surveys, monographs, etc.)
34–03 Historical (must also be assigned at least one classification number from Section 01)
34–04 Explicit machine computation and programs (not the theory of computation or programming)
34–06 Proceedings, conferences, etc.

34Axx General theory
34A05 Solutions in closed form, integration by quadratures, reduction of differential equations
34A08 Equations not solved with respect to the highest-order derivative, singular solutions
34A10 Initial value problems: general existence and uniqueness theorems; continuous dependence of solutions on parameters, initial conditions and boundary conditions [See also 45D05.]
34A15 Initial value problems: continuation of solutions
34A20 Differential equations in the complex domain [See also 30D05.]
34A25 Analytical theory: series, transformations, transforms, operational calculus, etc. [See also 44–XX, 47E05.]
34A30 Linear equations and systems
34A34 Nonlinear equations and systems, general
34A35 Differential equations of infinite order
34A40 Differential inequalities
34A45 Theoretical approximation of solutions
34A50 Numerical approximation of solutions {For numerical analysis, see 65Lxx.}
34A55 Inverse problems
34A60 Equations with multivalued right-hand sides [See also 49A50, 49E10.]
34A99 None of the above, but in this section

34Bxx Boundary value problems
34B05 Linear equations
34B10 Multipoint boundary value problems
34B15 Nonlinear boundary value problems
34B20 Weyl theory and its generalizations
34B25 Spectral theory, Sturm-Liouville, and scattering theory; eigenfunctions, eigenvalues, and expansions [See also 42–XX, 43–XX, 45C05, 47Axx, 47Bxx, 47E05.]
34B27 Green functions
34B30 Special equations (Mathieu, Hill, Bessel, etc.) [See also 33–XX.]
34B99 None of the above, but in this section

34Cxx Qualitative theory
34C05 Location of integral curves, singular points, limit cycles
34C10 Zeros, disconjugacy, oscillation and comparison of solutions
34C11 Growth, boundedness of solutions
34C15 Nonlinear oscillations
34C20 Transformation and reduction of equations and systems
34C25 Periodic solutions
34C27 Almost-periodic solutions
34C28 Other types of "recurrent" solutions
34C29 Averaging method [See also 47H10.]
34C30 Manifolds of solutions
34C35 Dynamical systems [See also 54H20, 58Fxx, 70–XX.]
34C40 Equations and systems on manifolds [See mainly 58Fxx, 58Gxx.]
34C45 Method of integral manifolds
34C50 Method of accelerated convergence
34C99 None of the above, but in this section

34Dxx Stability theory [See also 58F10, 93Dxx.]
34D05 Asymptotic properties; characteristic exponents
34D10 Perturbations
34D15 Singular perturbations
34D20 Ljapunov stability
34D25 Popov-type stability

34D30 Structural stability and analogous concepts [See also 58Fxx.]
34D40 Ultimate boundedness
34D99 None of the above, but in this section

34Exx Asymptotic theory
34E05 Asymptotic expansions
34E10 Perturbations
34E15 Singular perturbations, general theory
34E20 Singular perturbations, turning point theory, WKB-methods
34E99 None of the above, but in this section

34F05 Equations and systems with randomness [See also 60H10, 93Exx.]

34Gxx Differential equations in abstract spaces [See also 58D25.]
34G10 Linear equations [See also 47Axx, 47Bxx, 47D05.]
34G20 Nonlinear equations [See also 47Hxx.]
34G99 None of the above, but in this section

34H05 Control problems [See also 49–XX, 93–XX.]

34Kxx Functional-differential and differential-difference equations, with or without deviating (or retarded) arguments
34K05 General theory
34K10 Boundary value problems
34K15 Qualitative theory
34K20 Stability theory
34K25 Asymptotic theory
34K30 Equations in abstract spaces
34K35 Control problems
34K99 None of the above, but in this section

35–XX PARTIAL DIFFERENTIAL EQUATIONS

35–01 Elementary exposition, textbooks
35–02 Advanced exposition (research surveys, monographs, etc.)
35–03 Historical (must also be assigned at least one classification number from Section 01)
35–04 Explicit machine computation and programs (not the theory of computation or programming)
35–06 Proceedings, conferences, etc.

35Axx General theory
35A05 General existence and uniqueness theorems
35A07 Local existence and uniqueness theorems [See also 35H05, 35Sxx.]
35A08 Fundamental solutions
35A10 Cauchy-Kowalewski theorems
35A15 Variational methods
35A20 Analytic methods, singularities
35A22 Transform methods
35A25 Other special methods
35A30 Geometric theory, characteristics, transformations
35A35 Theoretical approximation to solutions
35A40 Numerical approximation to solutions {For numerical analysis, see 65Mxx, 65Nxx, 65P05.}
35A99 None of the above, but in this section

35Bxx Qualitative properties of solutions
35B05 Comparison theorems; oscillation, zeros and growth of solutions
35B10 Periodic solutions
35B15 Almost periodic solutions
35B20 Perturbations
35B25 Singular perturbations
35B30 Dependence of solutions on initial and boundary data, parameters
35B32 Bifurcation
35B35 Stability, boundedness
35B37 Control [See also 49–XX, 93–XX.]
35B40 Asymptotic behavior of solutions
35B45 A priori estimates
35B50 Maximum principles
35B60 Continuation and prolongation [See also 58A15, 58A17, 58Hxx.]
35B65 Smoothness of solutions
35B99 None of the above, but in this section

35Cxx Representations of solutions
35C05 Solutions in closed form
35C10 Series solutions, expansion theorems
35C15 Integral representations
35C20 Asymptotic expansions
35C99 None of the above, but in this section

35Dxx Generalized solutions
35D05 Existence of generalized solutions
35D10 Regularity of generalized solutions
35D99 None of the above, but in this section

35Exx Equations and systems with constant coefficients [See also 35N05.]
35E05 Fundamental solutions
35E10 Convexity properties
35E15 Initial value problems
35E20 General theory
35E99 None of the above, but in this section

35Fxx General first-order equations and systems
35F05 Linear equations and systems, general
35F10 Initial value problems for linear equations and systems
35F15 Boundary value problems for linear equations and systems
35F20 Nonlinear equations and systems, general
35F25 Initial value problems for nonlinear equations and systems
35F30 Boundary value problems for nonlinear equations and systems
35F99 None of the above, but in this section

35Gxx General higher-order equations and systems
35G05 Linear equations and systems, general
35G10 Initial value problems for linear equations and systems
35G15 Boundary value problems for linear equations and systems
35G20 Nonlinear equations and systems, general
35G25 Initial value problems for nonlinear equations and systems
35G30 Boundary value problems for nonlinear equations and systems
35G99 None of the above, but in this section

35H05 Hypoelliptic equations and systems [See also 58Gxx.]

35Jxx Elliptic equations and systems [See also 58G05, 58G10.]
35J05 Laplace equation, reduced wave equation (Helmholtz), Poisson equation
35J10 Schrödinger operator [See also 47A40.]
35J15 Second-order equations, general
35J20 Second-order equations, variational methods
35J25 Second-order equations, boundary value problems
35J30 Higher-order equations, general
35J35 Higher-order equations, variational methods
35J40 Higher-order equations, boundary value problems
35J45 Systems, general
35J50 Systems, variational methods
35J55 Systems, boundary value problems
35J60 Nonlinear equations and systems
35J65 Nonlinear boundary value problems for linear equations and systems; boundary value problems for nonlinear equations and systems
35J67 Boundary values of solutions
35J70 Equations and systems of degenerate type
35J85 Unilateral problems; variational inequalities [See also 35R35, 49A29.]
35J99 None of the above, but in this section

35Kxx Parabolic equations and systems [See also 58G11.]
35K05 Heat equation
35K10 Second-order equations, general
35K15 Second-order equations, initial value problems
35K20 Second-order equations, boundary value problems
35K22 Evolution equations (any order in the spatial derivatives) [See also 58D25.]
35K25 Higher-order equations, general
35K30 Higher-order equations, initial value problems
35K35 Higher-order equations, boundary value problems
35K40 Systems, general
35K45 Systems, initial value problems

35K50 Systems, boundary value problems
35K55 Nonlinear equations and systems
35K60 Nonlinear boundary value problems for linear equations and systems; boundary value problems for nonlinear equations and systems
35K65 Equations and systems of degenerate type
35K70 Ultraparabolic, pseudoparabolic problems
35K85 Unilateral problems; variational inequalities [See also 35R35, 49A29.]
35K99 None of the above, but in this section

35Lxx Hyperbolic equations and systems [See also 58G16.]
35L05 Wave equation
35L10 Second-order equations, general
35L15 Second-order equations, initial value problems
35L20 Second-order equations, boundary value problems
35L25 Higher-order equations, general
35L30 Higher-order equations, initial value problems
35L35 Higher-order equations, boundary value problems
35L40 First-order systems, general
35L45 First-order systems, initial value problems
35L50 First-order systems, boundary value problems
35L55 Higher-order hyperbolic systems
35L60 First-order nonlinear equations and systems
35L65 Conservation laws [See also 76–XX.]
35L67 Shocks and singularities
35L70 Second-order nonlinear equations and systems
35L75 Higher (>2) order nonlinear equations and systems
35L80 Equations and systems of degenerate type
35L85 Unilateral problems; variational inequalities [See also 35R35, 49A29.]
35L99 None of the above, but in this section

35M05 Equations and systems of mixed (Tricomi, etc.) or composite type {For degenerate types, elliptic, see 35Jxx, parabolic, see 35Kxx, hyperbolic, see 35Lxx, etc.}

35Nxx Overdetermined systems [See also 58G05, 58G07, 58Hxx.]
35N05 Constant coefficients
35N10 Variable coefficients, general
35N15 $\bar{\partial}$-Neumann problem and generalizations; formal complexes [See also 32Fxx and 58G05.]
35N99 None of the above, but in this section

35Pxx Spectral theory and eigenvalue problems [See also 47Axx, 47Bxx, 47F05.]
35P05 General spectral theory
35P10 Completeness of eigenfunctions, eigenfunction expansions
35P15 Estimation of eigenvalues, upper and lower bounds
35P20 Asymptotic distribution of eigenvalues and eigenfunctions
35P25 Scattering theory [See also 47A40.]
35P30 Nonlinear eigenvalue problems
35P99 None of the above, but in this section

35Qxx Special equations and problems [See also 35J05, 35K05, 35L05.]
35Q05 Euler-Poisson-Darboux equation and generalizations
35Q10 Navier-Stokes equations [See also 76D05.]
35Q15 Riemann-Hilbert problems [See also 30E25, 31A25, 31B20.]
35Q20 Particular equations of mathematical physics (Korteweg-de Vries, Burgers, etc.)
35Q99 None of the above, but in this section

35Rxx Miscellaneous topics {For equations on manifolds, see 58Gxx; for manifolds of solutions, see 58Bxx; for stochastic PDEs, see also 60H15.}
35R05 Equations with discontinuous coefficients or data
35R10 Difference-partial differential equations, equations with time lag
35R15 Equations on function spaces [See also 58D25.]
35R20 Operator equations, general [See also 34Gxx, 47A50, 47H15.]
35R25 Improperly posed problems
35R30 Inverse problems (undetermined coefficients, etc.)
35R35 Free boundary problems
35R45 Differential inequalities
35R60 Equations and systems with randomness
35R99 None of the above, but in this section

35Sxx Pseudodifferential operators [See also 47G05, 58G15.]
35S05 General theory
35S10 Initial value problems
35S15 Boundary value problems
35S99 None of the above, but in this section

39–XX FINITE DIFFERENCES AND FUNCTIONAL EQUATIONS

39–01 Elementary exposition, textbooks
39–02 Advanced exposition (research surveys, monographs, etc.)
39–03 Historical (must also be assigned at least one classification number from Section 01)
39–04 Explicit machine computation and programs (not the theory of computation or programming)
39–06 Proceedings, conferences, etc.

39Axx Finite differences [See also 65–XX.]
39A05 General
39A10 Difference equations
39A11 Stability of difference equations
39A12 Discrete version of topics in analysis
39A70 Difference operators [See also 47B39.]
39A99 None of the above, but in this section

39Bxx Functional equations [See also 30D05.]
39B05 General
39B10 Equations containing iterates, equations of rank one
39B20 Equations for one unknown function of one variable, rank greater than one
39B30 Equations for several unknown functions of one variable, systems
39B40 Equations for functions of several variables
39B50 Functional equations on algebraic structures
39B60 Matrix functional equations
39B70 Functional equations on abstract spaces or structures
39B99 None of the above, but in this section

39C05 Functional inequalities [See also 26Dxx.]

40–XX SEQUENCES, SERIES, SUMMABILITY

40–01 Elementary exposition, textbooks
40–02 Advanced exposition (research surveys, monographs, etc.)
40–03 Historical (must also be assigned at least one classification number from Section 01)
40–04 Explicit machine computation and programs (not the theory of computation or programming)
40–06 Proceedings, conferences, etc.

40Axx Convergence and divergence of infinite limiting processes
40A05 Convergence and divergence of series and sequences
40A10 Convergence and divergence of integrals
40A15 Convergence and divergence of continued fractions [See also 30B70.]
40A20 Convergence and divergence of infinite products
40A25 Approximation to limiting values (summation of series, etc.) {For the Euler-Maclaurin summation formula, see 65B15.}
40A30 Convergence and divergence of series and sequences of functions
40A99 None of the above, but in this section

40B05 Multiple sequences and series (should also be assigned at least one other classification number in this section)

40Cxx General summability methods
40C05 Matrix methods
40C10 Integral methods
40C15 Function-theoretic methods (including power series methods and semicontinuous methods)
40C99 None of the above, but in this section

40Dxx Direct theorems on summability
40D05 General theorems
40D09 Structure of summability fields
40D10 Tauberian constants and oscillation limits
40D15 Convergence factors and summability factors

40D20 Summability and bounded fields of methods
40D25 Inclusion and equivalence theorems
40D99 None of the above, but in this section

40Exx Inversion theorems
40E05 Tauberian theorems, general
40E10 Growth estimates
40E15 Lacunary inversion theorems
40E20 Tauberian constants
40E99 None of the above, but in this section

40F05 Absolute and strong summability

40Gxx Special methods of summability
40G05 Cesàro, Euler, Nörlund and Hausdorff methods
40G10 Abel, Borel and power series methods
40G99 None of the above, but in this section

40H05 Functional analytic methods in summability

40J05 Summability in abstract structures [See also 43A55, 46A35, 46B15.]

41–XX APPROXIMATIONS AND EXPANSIONS {For all approximation theory in the complex domain, see 30E05 and 30E10; for all trigonometric approximation and interpolation, see 42A10 and 42A15; for numerical approximation, see 65Dxx.}

41–01 Elementary exposition, textbooks
41–02 Advanced exposition (research surveys, monographs, etc.)
41–03 Historical (must also be assigned at least one classification number from Section 01)
41–04 Explicit machine computation and programs (not the theory of computation or programming)
41–06 Proceedings, conferences, etc.
41A05 Interpolation [See also 42A15 and 65D05.]
41A10 Approximation by polynomials {For approximation by trigonometric polynomials, see 42A10.}
41A15 Spline approximation
41A17 Inequalities in approximation (Bernšteĭn, Jackson, Nikol′skiĭ type inequalities)
41A20 Approximation by rational functions
41A21 Padé approximation
41A25 Rate of convergence, degree of approximation
41A27 Inverse theorems
41A28 Simultaneous approximation
41A29 Approximation with constraints
41A30 Approximation by other special function classes
41A35 Approximation by operators (in particular, by integral operators)
41A36 Approximation by positive operators
41A40 Saturation
41A44 Best constants
41A45 Approximation by arbitrary linear expressions
41A46 Approximation by arbitrary nonlinear expressions; widths and entropy
41A50 Best approximation, including Čebyšev systems
41A52 Uniqueness of best approximation
41A55 Approximate quadratures
41A58 Series expansions (e.g. Taylor, Lidstone series, but not Fourier series)
41A60 Asymptotic approximations, asymptotic expansions (steepest descent, etc.) [See also 30E15.]
41A63 Multidimensional problems (should also be assigned at least one other classification number in this section)
41A65 Abstract approximation theory (approximation in normed linear spaces and other abstract spaces)
41A80 Remainders in approximation formulas
41A99 Miscellaneous topics

42–XX FOURIER ANALYSIS

42–01 Elementary exposition, textbooks
42–02 Advanced exposition (research surveys, monographs, etc.)
42–03 Historical (must also be assigned at least one classification number from Section 01)
42–04 Explicit machine computation and programs (not the theory of computation or programming)
42–06 Proceedings, conferences, etc.

42Axx Fourier analysis in one variable
42A05 Trigonometric polynomials, inequalities, extremal problems
42A10 Trigonometric approximation
42A15 Trigonometric interpolation
42A16 Fourier coefficients, Fourier series of functions with special properties, special Fourier series
42A20 Convergence of Fourier and trigonometric series
42A24 Summability of Fourier and trigonometric series
42A28 Absolute convergence, absolute summability
42A32 Trigonometric series of special types (positive coefficients, monotonic coefficients, etc.)
42A38 Fourier and Fourier-Stieltjes transforms and other transforms of Fourier type
42A45 Multipliers
42A50 Conjugate functions, conjugate series, singular integrals
42A55 Lacunary series of trigonometric and other functions; Riesz products
42A61 Probabilistic methods
42A63 Uniqueness of trigonometric expansions, uniqueness of Fourier expansions, Riemann theory, localization
42A65 Completeness of sets of functions
42A70 Trigonometric moment problems
42A75 Classical almost periodic functions, mean periodic functions [See also 43A60.]
42A82 Positive definite functions
42A85 Convolution, factorization
42A99 None of the above, but in this section

42Bxx Fourier analysis in several variables
42B05 Fourier series and coefficients
42B10 Fourier and Fourier-Stieltjes transforms and other transforms of Fourier type
42B15 Multipliers
42B20 Singular integrals (Calderón-Zygmund, etc.)
42B25 Maximal functions, Littlewood-Paley theory
42B30 H^p-spaces
42B99 None of the above, but in this section

42Cxx Nontrigonometric Fourier analysis
42C05 Orthogonal functions and polynomials, general theory [See also 33A65.]
42C10 Fourier series in special orthogonal functions (Legendre polynomials, Walsh functions, etc.)
42C15 Series of general orthogonal functions, generalized Fourier expansions, nonorthogonal expansions
42C20 Rearrangements and other transformations of Fourier and other orthogonal series
42C25 Uniqueness and localization for orthogonal series
42C30 Completeness of sets of functions
42C99 None of the above, but in this section

43–XX ABSTRACT HARMONIC ANALYSIS {For other analysis on topological and Lie groups, see 22Exx.}

43–01 Elementary exposition, textbooks
43–02 Advanced exposition (research surveys, monographs, etc.)
43–03 Historical (must also be assigned at least one classification number from Section 01)
43–04 Explicit machine computation and programs (not the theory of computation or programming)
43–06 Proceedings, conferences, etc.
43A05 Measures on groups, semigroups, etc.
43A07 Means on groups, semigroups, etc.
43A10 Measure algebras on groups, semigroups, etc.
43A15 L^p-spaces and other function spaces on groups, semigroups, etc.
43A17 Analysis on ordered groups, H^p-theory
43A20 L^1-algebras on groups, semigroups, etc.
43A22 Homomorphisms and multipliers of function spaces on groups, semigroups, etc.
43A25 Fourier and Fourier-Stieltjes transforms on locally compact abelian groups
43A30 Fourier and Fourier-Stieltjes transforms on nonabelian groups and on semigroups, etc.
43A32 Other transforms and operators of Fourier type
43A35 Positive definite functions on groups, semigroups, etc.

43A40 Character groups and dual objects
43A45 Spectral synthesis on groups, semigroups, etc.
43A46 Special sets (thin sets, Kronecker sets, Helson sets, Ditkin sets, Sidon sets, etc.)
43A50 Convergence of Fourier series and of inverse transforms
43A55 Summability methods on groups, semigroups, etc. [See also 40J05.]
43A60 Almost periodic functions on groups and semigroups and their generalizations (recurrent functions, distal functions, etc.); almost automorphic functions
43A65 Representations of groups, semigroups, etc. [See also 22Dxx.]
43A70 Analysis on specific locally compact abelian groups [See also 12A85.]
43A75 Analysis on specific compact groups
43A77 Analysis on general compact groups
43A80 Analysis on other specific Lie groups [See also 22E30.]
43A85 Analysis on homogeneous spaces
43A90 Spherical functions [See also 22E45, 22E46.]
43A95 Categorical methods [See also 18–XX, 46Mxx.]
43A99 Miscellaneous topics

44–XX INTEGRAL TRANSFORMS, OPERATIONAL CALCULUS {For fractional derivatives and integrals, see 26A33. For numerical methods, see 65R10.}

44–01 Elementary exposition, textbooks
44–02 Advanced exposition (research surveys, monographs, etc.)
44–03 Historical (must also be assigned at least one classification number from Section 01)
44–04 Explicit machine computation and programs (not the theory of computation or programming)
44–06 Proceedings, conferences, etc.
44A05 General transforms [See also 42A38.]
44A10 Laplace transform
44A15 Special transforms (Legendre, Hilbert, etc.)
44A20 Transforms of special functions
44A30 Multiple transforms
44A35 Convolution
44A40 Calculus of Mikusiński and other similar operational calculi
44A45 Classical operational calculus
44A55 Discrete operational calculus
44A60 Moment problems
44A99 Miscellaneous topics

45–XX INTEGRAL EQUATIONS

45–01 Elementary exposition, textbooks
45–02 Advanced exposition (research surveys, monographs, etc.)
45–03 Historical (must also be assigned at least one classification number from Section 01)
45–04 Explicit machine computation and programs (not the theory of computation or programming)
45–06 Proceedings, conferences, etc.
45A05 Linear integral equations
45B05 Fredholm integral equations
45C05 Eigenvalue problems [See also 34B25, 35Pxx, 45P05.]
45D05 Volterra integral equations [See also 34A10.]
45Exx Singular integral equations [See also 30E20, 30E25, 44A15, 44A35.]
45E05 Integral equations with kernels of Cauchy type [See also 35J15.]
45E10 Integral equations of the convolution type (Abel, Picard, Toeplitz and Wiener-Hopf type) [See also 47B35.]
45E99 None of the above, but in this section
45Fxx Systems of linear integral equations
45F05 Systems of nonsingular linear integral equations
45F10 Dual, triple, etc., integral and series equations
45F15 Systems of singular linear integral equations
45F99 None of the above, but in this section
45Gxx Nonlinear integral equations [See also 47Hxx.]
45G05 Singular nonlinear integral equations
45G10 Other nonlinear integral equations
45H05 Miscellaneous special kernels [See also 44A15.]
45J05 Integro-ordinary differential equations
45K05 Integro-partial differential equations
45Lxx Approximation of solutions
45L05 Theoretical approximation of solutions
45L10 Numerical approximation of solutions {For numerical analysis, see 65R20.}
45L99 None of the above, but in this section
45Mxx Qualitative behavior
45M05 Asymptotics
45M10 Stability theory
45M99 None of the above, but in this section
45N05 Abstract integral equations, integral equations in abstract spaces
45P05 Integral operators [See also 47Axx, 47Bxx, 47G05.]

46–XX FUNCTIONAL ANALYSIS {For manifolds modeled on topological linear spaces, see 57N20, 58Bxx.}

46–01 Elementary exposition, textbooks
46–02 Advanced exposition (research surveys, monographs, etc.)
46–03 Historical (must also be assigned at least one classification number from Section 01)
46–04 Explicit machine computation and programs (not the theory of computation or programming)
46–06 Proceedings, conferences, etc.
46Axx Topological linear spaces
46A05 Locally convex spaces
46A06 Metrizable topological linear spaces and their duals (F-, DF-spaces, etc.)
46A07 Barrelled spaces
46A09 Bornological spaces
46A10 Locally bounded topological linear spaces
46A12 Spaces defined by special inductive or projective limits (LF-, nuclear, Schwartz, Silva spaces, etc.) [See also 46M10, 46M40.]
46A14 Spaces defined by compactness properties (Montel spaces, etc.)
46A15 Other topological linear spaces
46A20 Duality theory
46A22 Extension and lifting of functionals and operators [See also 46M10.]
46A25 Reflexivity and semi-reflexivity
46A30 Open mappings and closed graph theorems and completeness (including B-, B_r-completeness)
46A32 Spaces of linear operators
46A35 Summability and bases
46A40 Ordered topological linear spaces, vector lattices [See also 06F20, 46B30.]
46A45 Sequence spaces (including Köthe sequence spaces)
46A50 Compactness in topological linear spaces
46A55 Convexity, Choquet theory [See also 52A07.]
46A99 None of the above, but in this section
46Bxx Normed linear spaces and Banach spaces {For function spaces, see 46Exx.}
46B05 Topology in terms of the norms
46B10 Duality and reflexivity
46B15 Summability and bases
46B20 Geometry and structure
46B22 Spaces with Radon-Nikodým property [See also 46G10.]
46B25 Classical Banach spaces in the general theory
46B30 Banach lattices [See also 46A40.]
46B99 None of the above, but in this section
46Cxx Inner product spaces, Hilbert spaces {For function spaces, see 46Exx.}
46C05 Geometry and topology of the spaces
46C10 Other properties of such spaces
46C99 None of the above, but in this section
46D05 Spaces with indefinite inner product
46Exx Linear function spaces and their duals [See also 30H05; for function algebras, see 46J10.]
46E05 Lattices of continuous, differentiable or analytic functions
46E10 Topological linear spaces of continuous, differentiable or analytic functions
46E15 Banach spaces of continuous, differentiable or analytic functions

46E20 Hilbert spaces of continuous, differentiable or analytic functions
46E25 Rings and algebras of continuous, differentiable or analytic functions {For Banach function algebras, see 46J10, 46J15.}
46E27 Spaces of measures [See also 28A33.]
46E30 Spaces of measurable functions (L^p-spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, etc.)
46E35 Sobolev spaces and other spaces of "smooth" functions, imbedding theorems, trace theorems
46E39 Sobolev (and similar kinds of) spaces of functions of discrete variables
46E40 Spaces of vector- and operator-valued functions
46E99 None of the above, but in this section

46Fxx Distributions, generalized functions, distribution spaces {For distribution theory on nonlinear spaces, see 58Cxx.}
46F05 Topological linear spaces of test functions and distributions
46F10 Operations with distributions
46F12 Integral transforms in distribution spaces [See also 42–XX, 44–XX.]
46F15 Hyperfunctions, analytic functionals [See also 32A25, 32A45, 32C35, 58G07.]
46F20 Distributions as boundary values of analytic functions [See also 30Exx, 32A40.]
46F25 Distributions on infinite-dimensional spaces [See also 58C35.]
46F99 None of the above, but in this section

46Gxx Measures, integration, derivative {For integration on infinite-dimensional spaces, see 28C20; for nonlinear functional analysis, see 58–XX, especially 58Cxx.}
46G05 Derivatives
46G10 Vector-valued measures and integration [See also 28Bxx, 46B22.]
46G12 Measures and integration on abstract linear spaces [See also 28Cxx.]
46G15 Lifting theory [See also 28A51.]
46G20 Infinite-dimensional holomorphy [See also 32–XX, 58B12, 58C10.]
46G99 None of the above, but in this section

46Hxx Topological algebras, normed rings and algebras, Banach algebras {For group algebras, convolution algebras and measure algebras, see 43–XX.}
46H05 General theory
46H10 Ideals and subalgebras
46H15 Representations
46H20 Structure, classification
46H25 Normed modules and Banach modules, topological modules (if not placed in 13–XX or 16–XX)
46H30 Functional calculus [See also 47A60.]
46H99 None of the above, but in this section

46Jxx Commutative Banach algebras and commutative topological algebras
46J05 General theory
46J10 Banach algebras of continuous functions, function algebras
46J15 Banach algebras of differentiable or analytic functions, H^p-spaces [See also 30H05, 32A35, 32E25, 42B30.]
46J20 Ideals, maximal ideals, boundaries
46J25 Representations
46J30 Subalgebras
46J35 Structure, classification
46J99 None of the above, but in this section

46Kxx Rings and algebras with an involution
46K05 General theory
46K10 Representations
46K15 Hilbert algebras
46K99 None of the above, but in this section

46Lxx C^*-algebras and von Neumann (W^*-) algebras [See also 22D25.]
46L05 C^*-algebras, general theory
46L10 von Neumann algebras, general theory
46L30 States
46L35 Classifications, factors
46L40 Automorphisms
46L45 Decomposition theory
46L50 Noncommutative integration, noncommutative probability
46L55 Noncommutative dynamical systems [See also 28Dxx.]
46L60 Applications to physics
46L99 None of the above, but in this section

46Mxx Categorical methods [See also 18–XX.]
46M05 Tensor products
46M10 Projective and injective objects
46M15 Functors
46M20 Methods of algebraic topology (cohomology, sheaf and bundle theory, etc.) [See also 14F05, 18Fxx, 55Rxx.]
46M35 Abstract interpolation of topological vector spaces
46M40 Inductive and projective limits [See also 46A12.]
46M99 None of the above, but in this section

46N05 Miscellaneous applications of functional analysis

46P05 Functional analysis over fields other than R or C; non-Archimedean functional analysis [See also 12J25, 32E27.]

47–XX OPERATOR THEORY

47–01 Elementary exposition, textbooks
47–02 Advanced exposition (research surveys, monographs, etc.)
47–03 Historical (must also be assigned at least one classification number from Section 01)
47–04 Explicit machine computation and programs (not the theory of computation or programming)
47–06 Proceedings, conferences, etc.

47Axx Single linear operators: general theory
47A05 General (adjoints, conjugates, products, inverses, domains, ranges, etc.)
47A10 Spectrum, resolvent
47A12 Numerical range
47A15 Invariant subspaces
47A20 Dilations, extensions, compressions
47A25 Spectral sets
47A30 Norms (inequalities, more than one norm, etc.)
47A35 Ergodic theory [See also 28Dxx.]
47A40 Scattering theory [See also 34B25, 35P25, 47Dxx.]
47A45 Canonical models for contractions and nonselfadjoint operators
47A50 Equations involving linear operators, with vector unknowns
47A53 Fredholm operators
47A55 Perturbation theory
47A60 Functional calculus
47A62 Equations involving linear operators, with operator unknowns
47A65 Structure theory
47A66 (Non)quasitriangular, (non)quasidiagonal operators
47A67 Representation theory
47A68 Factorization theory
47A70 Eigenfunction expansions, rigged Hilbert spaces; eigenvalue problems in general [See also 49Gxx.]
47A99 None of the above, but in this section

47Bxx Single linear operators: special classes of operators
47B05 Compact operators, Riesz operators
47B10 Hilbert-Schmidt operators, trace class operators, nuclear operators, p-summing operators, etc.
47B15 Hermitian and normal operators (spectral measures, functional calculus, etc.)
47B20 Subnormal operators, hyponormal operators, etc.
47B25 Symmetric and selfadjoint operators (unbounded)
47B35 Toeplitz operators, Wiener-Hopf operators [See also 45P05, 47G05 for other integral operators.]
47B37 Operators on special spaces (weighted shifts, operators on sequence spaces, etc.)
47B38 Operators on function spaces
47B39 Difference operators [See also 39A70.]
47B40 Spectral operators, decomposable operators, etc.
47B44 Accretive operators, dissipative operators, etc.

47B47 Commutators, derivations
47B50 Operators on a space with an indefinite metric
47B55 Operators on ordered spaces
47B99 None of the above, but in this section

47Cxx Single linear operators as elements of algebraic systems
47C05 Operators in algebras
47C10 Operators in *-algebras
47C15 Operators in C^*- or von Neumann algebras
47C99 None of the above, but in this section

47Dxx Algebraic systems of linear operators [See also 46Lxx.]
47D05 Semigroups of operators {For nonlinear operators, see 47H20; see also 20M20.}
47D07 Markov semigroups {For Markov processes, see 60Jxx.}
47D10 Groups of operators
47D15 Linear spaces of operators
47D20 Convex sets and cones of operators
47D25 Operator algebras and ideals, on Hilbert space
47D30 Operator algebras and ideals, on Banach spaces and other linear topological spaces
47D35 Dual spaces of operator algebras and topological groups
47D40 Algebras of unbounded operators
47D45 Applications to physics
47D99 None of the above, but in this section

47E05 Ordinary differential operators [See also 34B25, 58Fxx.]

47F05 Partial differential operators [See also 35Pxx, 58Gxx.]

47G05 Integral, integro-differential, and pseudodifferential operators [See also 35Sxx, 45P05, 58Gxx.]

47Hxx Nonlinear operators {For global and geometric aspects, see 58–XX, especially 58Cxx.}
47H05 Monotone operators
47H06 Accretive operators, dissipative operators, etc.
47H07 Monotone and positive operators on ordered Banach spaces or other ordered topological vector spaces
47H09 Nonexpansive mappings, ultimately compact mappings, A-proper mappings, K-set contractions, etc.
47H10 Fixed-point theorems [See also 34C29, 54H25, 55M20, 58C30.]
47H12 Spectral theory of nonlinear operators
47H15 Equations involving nonlinear operators [See also 58E07 for abstract bifurcation theory.]
47H17 Methods for solving equations involving nonlinear operators {For numerical analysis, see 65J15.}
47H20 Semigroups of nonlinear operators [See also 58D07.]
47H99 None of the above, but in this section

49–XX CALCULUS OF VARIATIONS AND OPTIMAL CONTROL; OPTIMIZATION [See also 34H05, 65Kxx, 90Cxx, 93–XX.]

49–01 Elementary exposition, textbooks
49–02 Advanced exposition (research surveys, monographs, etc.)
49–03 Historical (must also be assigned at least one classification number from Section 01)
49–04 Explicit machine computation and programs (not the theory of computation or programming)
49–06 Proceedings, conferences, etc.

49Axx Existence theory for optimal solutions
49A05 Free problems in one independent variable
49A10 Problems involving ordinary differential equations, optimal control
49A21 Free problems in two or more independent variables
49A22 Problems involving partial differential equations, optimal control
49A27 Problems in abstract spaces
49A29 Variational inequalities
49A34 Problems involving functional relations other than differential equations
49A36 Optimal solutions belonging to restricted classes (bang-bang controls, etc.)
49A40 Minimax problems
49A45 Game theory; pursuit and evasion [See also 90Dxx.]
49A50 Topology of solutions, weak and strong minima, semicontinuity, convexity, orientor fields
49A51 Fréchet and Gâteaux differentiability
49A55 Duality theory
49A60 Optimal stochastic control [See also 93Exx.]
49A99 None of the above, but in this section

49Bxx Necessary conditions and sufficient conditions for optimality
49B05 Free problems in one independent variable
49B10 Problems involving ordinary differential equations, optimal control
49B21 Free problems in two or more independent variables
49B22 Problems involving partial differential equations, optimal control
49B27 Problems in abstract spaces
49B34 Problems involving functional relations other than differential equations
49B36 Optimal solutions belonging to restricted classes
49B40 Minimax problems
49B50 Sensitivity of optimal solutions in the presence of perturbations
49B60 Optimal stochastic control [See also 93Exx.]
49B99 None of the above, but in this section

49Cxx Carathéodory, Hamilton-Jacobi theories, including dynamic programming [See also 90C39.]
49C05 Free problems and problems involving ordinary differential equations
49C10 Free problems and problems involving partial differential equations
49C15 Problems in abstract spaces or involving functional relations other than differential equations
49C20 Dynamic programming method
49C99 None of the above, but in this section

49Dxx Methods of successive approximations {For discrete problems, see 90Cxx; see also 65Kxx.}
49D05 Methods based on necessary conditions
49D07 Gradient methods
49D10 Methods of steepest descent type
49D15 Methods of Newton-Raphson, Galerkin and Ritz types
49D20 Methods of relaxation type
49D25 Finite difference methods
49D27 Decomposition methods
49D29 Multiplier methods
49D30 Other methods, not based on necessary conditions (penalty function, etc.)
49D35 Methods of linear programming type
49D37 Nonlinear programming
49D39 Semi-infinite programming
49D40 Methods of quadratic programming type
49D45 Methods of convex programming type
49D49 Geometric programming
49D50 Periodic optimization
49D99 None of the above, but in this section

49Exx Controllability and geometry of control problems
49E05 General dependence on controls
49E10 Orientor fields (contingency equations)
49E15 Attainable sets, controllability
49E20 Interrelations between stability problems and optimization problems
49E25 Effect of perturbations on controllability
49E30 Relations between controllability and optimal solutions
49E99 None of the above, but in this section

49Fxx Manifolds [See also 58Exx.]
49F05 Exterior differential forms, invariant integrals (Cartan theory) [See mainly 58A15.]
49F10 Minimal surfaces [See mainly 53A10, also 58E12.]
49F15 Morse theory in Hilbert and other spaces [See also 57R27, 58Exx.]
49F20 Geometric measure and integration theory, integral and normal currents, flat chains and cochains, varifolds [See also 28A75, 32C30, 58A25, 58C35.]
49F22 Existence and structure of solutions to variational problems in geometric measure-theoretic setting

49F25 Surface area; Weierstrass and Burkill integrals, subadditive set functions
49F99 None of the above, but in this section

49Gxx Variational methods for eigenvalues [See also 47A70.]
49G05 Variational approach to eigenvalues
49G10 Rayleigh-Ritz methods
49G15 Weinstein and Aronszajn methods, intermediate problems
49G20 Linear operators in Hilbert spaces
49G99 None of the above, but in this section

49H05 Variational principles of physics [See also 70–XX, 81–XX.]

51–XX GEOMETRY {For algebraic geometry, see 14–XX.}

51–01 Elementary exposition, textbooks
51–02 Advanced exposition (research surveys, monographs, etc.)
51–03 Historical (must also be assigned at least one classification number from Section 01)
51–04 Explicit machine computation and programs (not the theory of computation or programming)
51–06 Proceedings, conferences, etc.

51Axx Linear incidence geometry
51A05 General theory and projective geometries
51A10 Homomorphism, automorphism and dualities
51A15 Structures with parallelism
51A20 Configuration theorems
51A25 Algebraization [See also 12Kxx, 20N10.]
51A30 Desarguesian and Pappian geometries
51A35 Non-Desarguesian affine and projective planes
51A40 Translation planes and spreads
51A45 Incidence structures imbeddable into projective geometries
51A99 None of the above, but in this section

51Bxx Nonlinear incidence geometry
51B05 General theory
51B10 Möbius geometries
51B15 Laguerre geometries
51B20 Minkowski geometries
51B25 Lie geometries
51B99 None of the above, but in this section

51C05 Ring geometry (Hjelmslev, Barbilian, etc.)

51Dxx Geometric closure systems
51D05 Abstract (Maeda) geometries
51D10 Abstract geometries with exchange axiom
51D15 Abstract geometries with parallelism
51D20 Combinatorial geometries [See also 05B25.]
51D25 Lattices of subspaces [See also 05B35.]
51D30 Continuous geometries and related topics
51D99 None of the above, but in this section

51Exx Finite geometry
51E05 General block designs [See also 05B05.]
51E10 Steiner systems
51E15 Affine and projective planes
51E20 Combinatorial structures in finite projective spaces [See also 05Bxx.]
51E25 Finite nonlinear geometries
51E30 Other finite incidence structures [See also 05B30.]
51E99 None of the above, but in this section

51Fxx Metric geometry
51F05 Absolute planes
51F10 Absolute spaces
51F15 Reflection groups, reflection geometries [See also 20H10, 20H15.]
51F20 Congruence and orthogonality [See also 20H05.]
51F25 Orthogonal and unitary groups [See also 20H05.]
51F99 None of the above, but in this section

51G05 Ordered geometries (ordered incidence structures, etc.)

51Hxx Topological geometry
51H05 General theory
51H10 Topological linear incidence structures
51H15 Topological nonlinear incidence structures
51H20 Topological geometries on manifolds [See also 57–XX.]
51H25 Geometries with differentiable structure [See also 53Cxx, 53C70.]
51H30 Geometries with algebraic manifold structure [See also 14–XX.]
51H99 None of the above, but in this section

51Jxx Incidence groups
51J05 General theory
51J10 Projective incidence groups
51J15 Kinematic spaces
51J20 Representation by near-fields and near-algebras [See also 12K05, 16A76.]
51J99 None of the above, but in this section

51Kxx Distance geometry
51K05 General theory
51K10 Synthetic differential geometry
51K99 None of the above, but in this section

51Lxx Geometric order structures [See also 53C75.]
51L05 Geometry of orders of nondifferentiable curves
51L10 Directly differentiable curves
51L15 n-vertex theorems via direct methods
51L20 Geometry of orders of surfaces
51L99 None of the above, but in this section

51Mxx Real and complex geometry
51M05 Euclidean geometries
51M10 Hyperbolic and elliptic geometries
51M15 Geometric constructions
51M20 Polyhedra and polytopes; regular figures, division of spaces [See also 51F15.]
51M25 Length, area and volume [See also 26B15.]
51M30 Line geometries and their generalizations
51M35 Synthetic treatment of fundamental manifolds in projective geometries (Grassmannians, Veronesians and their generalizations) [See also 14M15.]
51M99 None of the above, but in this section

51Nxx Analytic and descriptive geometry
51N05 Descriptive geometry
51N10 Affine analytic geometry
51N15 Projective analytic geometry
51N20 Euclidean analytic geometry
51N25 Analytic geometry with other transformation groups
51N30 Geometry of classical groups [See also 20Gxx, 14Lxx.]
51N35 Questions of classical algebraic geometry [See also 14Nxx.]
51N99 None of the above, but in this section

52–XX CONVEX SETS AND RELATED GEOMETRIC TOPICS

52–01 Elementary exposition, textbooks
52–02 Advanced exposition (research surveys, monographs, etc.)
52–03 Historical (must also be assigned at least one classification number from Section 01)
52–04 Explicit machine computation and programs (not the theory of computation or programming)
52–06 Proceedings, conferences, etc.
52A01 Axiomatic and generalized convexity
52A05 Convex sets without dimension restrictions
52A07 Convex sets in topological vector spaces [See also 46A55.]
52A10 Convex sets in 2 dimensions
52A15 Convex sets in 3 dimensions
52A20 Convex sets in n dimensions
52A22 Random convex sets and integral geometry [See also 53C65, 60D05.]
52A25 Polyhedra and polytopes
52A30 Invariants of convex sets (star-shaped, (m,n)-convex, etc.)
52A35 Helly type theorems
52A37 Other problems of combinatorial geometry
52A40 Inequalities and extremum problems
52A43 Lattices and convex bodies [See also 10E05.]
52A45 Packing, covering, tiling [See also 05B40, 05B45, 10E30, 51–XX.]
52A50 Hilbert geometry [See also 51Kxx.]
52A55 Spherical and hyperbolic convexity
52A99 Miscellaneous topics

53–XX DIFFERENTIAL GEOMETRY {For differential topology, see 57Rxx. For foundational questions of differentiable manifolds, see 58Axx.}

53–01 Elementary exposition, textbooks
53–02 Advanced exposition (research surveys, monographs, etc.)
53–03 Historical (must also be assigned at least one classification number from Section 01)
53–04 Explicit machine computation and programs (not the theory of computation or programming)
53–06 Proceedings, conferences, etc.

53Axx Classical differential geometry

53A04 Curves in Euclidean space
53A05 Surfaces in Euclidean space
53A07 Higher-dimension and -codimension surfaces in Euclidean n-space
53A10 Minimal surfaces, surfaces with prescribed mean curvature [See also 49F10, 53C42.]
53A15 Affine differential geometry
53A17 Kinematics
53A20 Projective differential geometry
53A25 Differential line geometry
53A30 Conformal differential geometry
53A35 Non-Euclidean differential geometry
53A40 Other special differential geometries
53A45 Vector and tensor analysis
53A50 Spinor analysis
53A55 Differential invariants (local theory), geometric objects
53A60 Geometry of webs [See also 14C21, 20N05.]
53A99 None of the above, but in this section

53Bxx Local differential geometry

53B05 Linear and affine connections
53B10 Projective connections
53B15 Other connections
53B20 Local Riemannian geometry
53B21 Methods of Riemannian geometry
53B25 Local submanifolds [See also 53C40.]
53B30 Lorentz metrics, indefinite metrics
53B35 Hermitian and Kählerian structures [See also 32Cxx.]
53B40 Finsler spaces and generalizations (areal metrics)
53B50 Applications to physics
53B99 None of the above, but in this section

53Cxx Global differential geometry [See also 51H25, 58–XX; for related bundle theory, see 55Rxx, 57Rxx.]

53C05 Connections
53C10 G-structures
53C12 Foliations [See also 57R30, 57R32.]
53C15 Almost complex, contact, symplectic, almost product structures, etc.
53C20 Riemannian manifolds, including pinching [See also 31C12, 58B20.]
53C21 Methods of Riemannian geometry
53C22 Geodesics [See also 58E10.]
53C25 Special Riemannian manifolds (Einstein, Sasakian, etc.)
53C30 Homogeneous manifolds [See also 14M15, 14M17, 32M10, 57T15.]
53C35 Symmetric spaces [See also 32M15, 57T15.]
53C40 Submanifolds [See also 53B25.]
53C42 Immersions (minimal, prescribed curvature, tight, etc.) [See also 49F10, 53A10, 57R40, 57R42.]
53C45 Global surface theory (convex surfaces à la A. D. Aleksandrov)
53C50 Lorentz manifolds, manifolds with indefinite metrics
53C55 Hermitian and Kählerian manifolds [See also 32Cxx.]
53C60 Finsler spaces and generalizations (areal metrics) [See also 58B20.]
53C65 Integral geometry [See also 52A22, 60D05.]; differential forms, currents, etc. [See mainly 58Axx.]
53C70 Direct methods (G-spaces of Busemann, etc.)
53C75 Geometric orders, order geometry [See also 51Lxx.]
53C80 Applications to physics
53C99 None of the above, but in this section

54–XX GENERAL TOPOLOGY {For the topology of manifolds of all dimensions, see 57Nxx.}

54–01 Elementary exposition, textbooks
54–02 Advanced exposition (research surveys, monographs, etc.)
54–03 Historical (must also be assigned at least one classification number from Section 01)
54–04 Explicit machine computation and programs (not the theory of computation or programming)
54–06 Proceedings, conferences, etc.

54Axx Generalities

54A05 Topological spaces and generalizations (closure spaces, etc.)
54A10 Change of topology, comparison of topologies
54A15 Syntopogeneous structures
54A20 Convergence (general theory) and limits
54A25 Cardinality properties (discrete subsets, weight, etc.), ultrafilters, etc. [See also 03Exx, 04A30.]
54A35 Consistency and independence results [See also 03E35.]
54A40 Fuzzy topology [See also 03E72.]
54A99 None of the above, but in this section

54Bxx Basic constructions

54B05 Subspaces
54B10 Product spaces
54B15 Quotient spaces, decompositions
54B17 Adjunction spaces and similar constructions
54B20 Hyperspaces
54B25 Sums, inverse limits
54B30 Categorical methods [See also 18B30.]
54B35 Spectra
54B40 Presheaves and sheaves [See also 18F20.]
54B99 None of the above, but in this section

54Cxx Maps and general types of spaces defined by maps

54C05 Continuous maps
54C08 Connectivity maps, semicontinuous maps, etc.
54C10 Special maps: open, closed, perfect, almost open, light, etc.
54C15 Retraction
54C20 Extension
54C25 Imbedding
54C30 Real-valued functions [See also 26–XX.]
54C35 Function spaces [See also 58D15.]
54C40 $C(X)$; algebraic techniques (ideals, etc.) [See also 46J10.]
54C45 C- and C^*-imbedding
54C50 Zero sets, Baire sets and functions [See also 26A21.]
54C55 Absolute neighborhood extensor, absolute extensor, absolute neighborhood retract (ANR), absolute retract spaces (general properties) [See also 54F40, 55M15.]
54C56 Shape theory [See mainly 55P55, 57N25.]
54C60 Set-valued maps [See also 26E25, 28B20.]
54C65 Selections [See also 28B20.]
54C70 Entropy
54C99 None of the above, but in this section

54Dxx Fairly general properties

54D05 Connected and locally connected spaces (general aspects)
54D10 Separation axioms, $T_0 - T_3$
54D15 Higher separation axioms (completely regular, normal, perfectly or collectionwise normal, etc.)
54D18 Paracompactness, pointwise paracompactness, etc.
54D20 Covering properties: Lindelöf, (m,n)-compact, etc.
54D25 "P-minimal" and "P-closed" spaces
54D30 Compact spaces and generalizations
54D35 Compactifications, etc.
54D40 Remainders
54D45 Local compactness, σ-compactness
54D50 k-spaces
54D55 Sequential spaces
54D60 Realcompactness and realcompactification
54D99 None of the above, but in this section

54Exx Spaces with richer structures

54E05 Proximity structures and generalizations
54E10 p-maps
54E15 Uniform structures and generalizations
54E17 Nearness spaces
54E18 p-spaces, M-spaces, σ-spaces, etc.

54E20 Stratifiable spaces, cosmic spaces, etc.
54E25 Semimetric spaces
54E30 Moore spaces
54E35 Metric spaces, metrizability
54E40 Isometries, contractions, expansions
54E45 Compact (locally compact) metric spaces
54E50 Complete metric spaces
54E52 Completions, Baire category
54E55 Bitopologies
54E60 CW-complexes, triangulable spaces
54E65 Countability conditions, separability
54E99 None of the above, but in this section

54Fxx Special properties
54F05 Ordered topological spaces, partially ordered spaces [See also 06B30, 06F30.]
54F15 Continua and generalizations
54F20 Special types of continua
54F25 Peano spaces and generalizations
54F30 Cyclic elements
54F35 Higher dimensional local connectedness [See also 55Mxx, 55Nxx.]
54F40 Compact (locally compact) absolute neighborhood retracts
54F43 Shape theory [See mainly 55P55, 57N25.]
54F45 Dimension theory [See also 55M10.]
54F50 Spaces of dimension $\leqslant 1$; curves, dendrites [See also 26A03.]
54F55 Unicoherence, multicoherence
54F60 Maps into S_n
54F62 Periodic maps
54F65 Topological characterizations of particular spaces
54F99 None of the above, but in this section

54Gxx Peculiar spaces
54G05 Extremally disconnected spaces, F-spaces, etc.
54G10 P-spaces
54G15 Pathological spaces
54G20 Counterexamples
54G99 None of the above, but in this section

54Hxx Connections with other structures, applications
54H05 Descriptive set theory (topological aspects of Borel, analytic, projective, etc. sets) [See also 03E15, 04A15, 26A21, 28A05.]
54H10 Topological representations of algebraic systems [See also 22–XX.]
54H12 Topological lattices, etc. [See also 06B30, 06F30.]
54H13 Topological fields, rings, etc. {For algebraic aspects, see 12Jxx, 13Jxx, 16A80.}
54H15 Transformation groups and semigroups [See also 20M20, 22–XX, 57Sxx.]
54H20 Topological dynamics [See also 28Dxx, 34C35, 58Fxx.]
54H25 Fixed-point and coincidence theorems [See also 47H10, 55M20.]
54H99 None of the above, but in this section

54J05 Nonstandard topology [See also 03Hxx.]

55–XX ALGEBRAIC TOPOLOGY

55–01 Elementary exposition, textbooks
55–02 Advanced exposition (research surveys, monographs, etc.)
55–03 Historical (must also be assigned at least one classification number from Section 01)
55–04 Explicit machine computation and programs (not the theory of computation or programming)
55–06 Proceedings, conferences, etc.

55Mxx Classical topics {For the topology of Euclidean spaces and manifolds, see 57N05, 57N10, 57N15.}
55M05 Duality
55M10 Dimension theory [See also 54F45.]
55M15 Absolute neighborhood retracts [See also 54C55, 54F40.]
55M20 Fixed points and coincidences [See also 54H25.]
55M25 Degree, winding number
55M30 Ljusternik-Schnirelman (Šnirel'man) category of a space
55M35 Finite groups of transformations (including Smith theory) [See also 57S17.]
55M99 None of the above, but in this section

55Nxx Homology and cohomology theories [See also 57Txx.]
55N05 Čech types
55N07 Steenrod-Sitnikov homologies
55N10 Singular theory
55N15 K-theory {For algebraic K-theory, see 18F25.}
55N20 Generalized (extraordinary) homology and cohomology theories
55N22 Bordism and cobordism theories, formal group laws [See also 14L05, 57R75, 57R77, 57R85, 57R90.]
55N25 Homology with local coefficients, equivariant cohomology
55N30 Sheaf cohomology [See also 18F20, 32C35, 32L10.]
55N35 Other homology theories
55N40 Axioms for homology theory and uniqueness theorems
55N45 Products and intersections
55N99 None of the above, but in this section

55Pxx Homotopy theory {For simple homotopy type, see 57Q10.}
55P05 Homotopy extension properties, cofibrations
55P10 Homotopy equivalences
55P15 Classification of homotopy type
55P20 Eilenberg-Mac Lane spaces
55P25 Spanier-Whitehead duality
55P30 Eckmann-Hilton duality
55P35 Loop spaces
55P40 Suspensions
55P42 Stable homotopy theory, spectra
55P45 H-spaces and duals
55P47 Infinite loop spaces
55P50 Category and cocategory, etc.
55P55 Shape theory [See also 54C56, 54F43, 55Q07.]
55P60 Localization and completion
55P62 Rational homotopy theory
55P65 Homotopy functors
55P99 None of the above, but in this section

55Qxx Homotopy groups
55Q05 Homotopy groups, general; sets of homotopy classes
55Q07 Shape groups
55Q10 Stable homotopy groups
55Q15 Whitehead products and generalizations
55Q20 Homotopy groups of wedges, joins, and simple spaces
55Q25 Hopf invariants
55Q30 Homotopy groups of triads, n-ads
55Q35 Operations in homotopy groups
55Q40 Homotopy groups of spheres
55Q45 Stable homotopy of spheres
55Q50 The J-morphism
55Q52 Homotopy groups of special spaces
55Q55 Cohomotopy groups
55Q70 Homotopy groups of special types [See also 55N05, 55N07.]
55Q99 None of the above, but in this section

55Rxx Fiber spaces and bundles [See also 18F15, 32Lxx, 46M20, 57R20, 57R22, 57R25.]
55R05 Fiber spaces
55R10 Fiber bundles
55R15 Classification
55R20 Spectral sequences and homology of fiber spaces [See also 55Txx.]
55R25 Sphere bundles and vector space bundles
55R35 Classifying spaces of groups and H-spaces
55R40 Homology of classifying spaces, characteristic classes [See also 57Txx, 57R20.]
55R45 Homology and homotopy of BO and BU; Bott periodicity
55R50 Stable classes of vector space bundles, K-theory {For algebraic K-theory, see 18F25.}
55R55 Fiberings with singularities
55R60 Microbundles and block bundles [See also 57N55, 57Q50.]
55R65 Generalizations of fiber spaces and bundles
55R99 None of the above, but in this section

55Sxx Operations and obstructions
55S05 Primary cohomology operations
55S10 Steenrod algebra
55S12 Dyer-Lashof operations

55S15 Symmetric products, cyclic products
55S20 Secondary and higher cohomology operations
55S25 K-theory operations and generalized cohomology operations
55S30 Massey products
55S35 Obstruction theory
55S36 Extension and compression of mappings
55S37 Classification of mappings
55S40 Sectioning fiber spaces and bundles
55S45 Postnikov systems, k-invariants
55S99 None of the above, but in this section

55Txx Spectral sequences [See also 18G40, 55R20.]
55T05 General
55T10 Serre spectral sequences
55T15 Adams spectral sequences
55T20 Eilenberg-Moore spectral sequences [See also 57T35.]
55T25 Generalized cohomology
55T99 None of the above, but in this section

55Uxx Applied homological algebra and category theory [See also 18Gxx.]
55U05 Abstract complexes
55U10 Semisimplicial complexes
55U15 Chain complexes
55U20 Universal coefficient theorems, Bockstein operator
55U25 Homology of a product, Künneth formula
55U30 Duality
55U35 Abstract homotopy theory
55U40 Topological categories
55U99 None of the above, but in this section

57–XX MANIFOLDS AND CELL COMPLEXES {For complex manifolds, see 32C10.}
57–01 Elementary exposition, textbooks
57–02 Advanced exposition (research surveys, monographs, etc.)
57–03 Historical (must also be assigned at least one classification number from Section 01)
57–04 Explicit machine computation and programs (not the theory of computation or programming)
57–06 Proceedings, conferences, etc.

57Mxx Low-dimensional topology (old 55Axx)
57M05 Fundamental group, presentations, free differential calculus
57M10 Covering spaces
57M12 Special coverings, e.g. branched
57M15 Relations with graph theory [See also 05Cxx.]
57M20 Two-dimensional complexes
57M25 Knots and links in S^3 {For higher dimensions, see 57Q45.}
57M30 Wild knots and surfaces, etc., wild imbeddings
57M35 Dehn's Lemma, sphere theorem, loop theorem, asphericity
57M40 Characterizations of E^3 and S^3 (Poincaré conjecture) [See also 57N12.]
57M99 None of the above, but in this section

57Nxx Topological manifolds
57N05 Topology of E^2, 2-manifolds
57N10 Topology of general 3-manifolds [See also 57Mxx.]
57N12 Topology of E^3 and S^3 [See also 57M40.]
57N13 Topology of E^4, 4-manifolds [See also 14Jxx, 32Jxx.]
57N15 Topology of E^n, n-manifolds $(4<n<\infty)$
57N17 Topology of topological vector spaces
57N20 Topology of infinite-dimensional manifolds [See also 58Bxx.]
57N25 Shapes [See also 54C56, 54F43, 55P55, 55Q07.]
57N30 Engulfing
57N35 Imbeddings and immersions
57N37 Isotopy and pseudo-isotopy
57N40 Neighborhoods of submanifolds
57N45 Flatness and tameness
57N50 $S^{n-1} \subset E^n$, Schoenflies problem
57N55 Microbundles and block bundles [See also 55R60, 57Q50.]
57N60 Cellularity
57N65 Algebraic topology of manifolds
57N70 Cobordism and concordance
57N75 General position and transversality
57N80 Stratifications
57N99 None of the above, but in this section

57Pxx Generalized manifolds [See also 18F15.]
57P05 Local properties
57P10 Poincaré duality spaces
57P99 None of the above, but in this section

57Qxx PL-topology
57Q05 The general topology of complexes
57Q10 Simple homotopy type, Whitehead torsion, Reidemeister-Franz torsion, etc.
57Q12 Wall finiteness obstruction for CW-complexes
57Q15 Triangulating manifolds
57Q20 Cobordism
57Q25 Comparison of PL-structures: classification, Hauptvermutung
57Q30 Engulfing
57Q35 Imbeddings and immersions
57Q37 Isotopy
57Q40 Regular neighborhoods
57Q45 Knots and links (in high dimensions) {For the low-dimensional case, see 57M25.}
57Q50 Microbundles and block bundles [See also 55R60, 57N55.]
57Q55 Approximations
57Q60 Cobordism and concordance
57Q65 General position and transversality
57Q99 None of the above, but in this section

57Rxx Differential topology {For foundational questions of differentiable manifolds, see 58Axx; for infinite-dimensional manifolds, see 58Bxx.}
57R05 Triangulating
57R10 Smoothing
57R12 Smooth approximations
57R15 Specialized structures on manifolds (spin manifolds, frame manifolds, etc.)
57R19 Algebraic topology of manifolds
57R20 Characteristic classes and numbers
57R22 Topology of vector bundles and fiber bundles [See also 55Rxx.]
57R25 Vector fields, frame fields, etc.
57R27 Controllability of vector fields on C^∞ and real-analytic manifolds [See also 49E15, 49F15.]
57R30 Foliations; geometric theory
57R32 Classifying spaces for foliations; Gel'fand-Fuks cohomology
57R35 Differentiable mappings
57R40 Imbeddings
57R42 Immersions
57R45 Singularities of differentiable mappings
57R50 Diffeomorphisms
57R52 Isotopy
57R55 Differentiable structures
57R60 Homotopy spheres, Poincaré conjecture
57R65 Surgery and handlebodies
57R67 Surgery obstructions, Wall groups [See also 18F25.]
57R70 Critical points and critical submanifolds
57R75 O- and SO-cobordism
57R77 Complex cobordism (U- and SU-cobordism) [See also 55N22.]
57R80 h- and s-cobordism
57R85 Equivariant cobordism
57R90 Other types of cobordism [See 55N22.]
57R95 Realizing cycles by submanifolds
57R99 None of the above, but in this section

57Sxx Topological transformation groups [See also 20F34, 22–XX, 54H15, 58D05.]
57S05 Topological properties of groups of homeomorphisms
57S10 Compact groups of homeomorphisms
57S15 Compact Lie groups of differentiable transformations
57S17 Finite transformation groups
57S20 Noncompact Lie groups of transformations
57S25 Groups acting on specific manifolds
57S30 Discontinuous groups of transformations
57S99 None of the above, but in this section

57Txx Homology and homotopy of topological groups and related structures
- 57T05 Hopf algebras [See also 16A24.]
- 57T10 Homology and cohomology of Lie groups
- 57T15 Homology and cohomology of homogeneous spaces of Lie groups
- 57T20 Homotopy groups of topological groups and homogeneous spaces
- 57T25 Homology and cohomology of *H*-spaces
- 57T30 Bar and cobar constructions [See also 18G55, 55Uxx.]
- 57T35 Applications of Eilenberg-Moore spectral sequences [See also 55R20, 55T20.]
- 57T99 None of the above, but in this section

58-XX GLOBAL ANALYSIS, ANALYSIS ON MANIFOLDS [See also 32Cxx, 32Fxx, 46-XX, 47Hxx, 53Cxx; for geometric integration theory, see 49F20, 49F22.]
- 58-01 Elementary exposition, textbooks
- 58-02 Advanced exposition (research surveys, monographs, etc.)
- 58-03 Historical (must also be assigned at least one classification number from Section 01)
- 58-04 Explicit machine computation and programs (not the theory of computation or programming)
- 58-06 Proceedings, conferences, etc.

58Axx General theory of differentiable manifolds
- 58A05 Differentiable manifolds, foundations
- 58A07 Real-analytic and Nash manifolds [See also 32C05.]
- 58A10 Differential forms
- 58A12 de Rham theory [See also 14Fxx.]
- 58A14 Hodge theory [See also 14C30, 14Fxx, 32Cxx.]
- 58A15 Exterior differential systems (Cartan theory)
- 58A17 Pfaffian systems
- 58A20 Jets
- 58A25 Currents
- 58A30 Vector distributions (subbundles of the tangent bundles)
- 58A35 Stratified sets [See also 32Bxx, 58Cxx.]
- 58A40 Differential spaces
- 58A99 None of the above, but in this section

58Bxx Infinite-dimensional manifolds
- 58B05 Homotopy and topological questions
- 58B10 Differentiability questions
- 58B12 Questions of holomorphy [See also 32-XX, 46G20.]
- 58B15 Fredholm structures [See also 47A53.]
- 58B20 Riemannian, Finsler and other geometric structures [See also 53C20, 53C60.]
- 58B25 Group structures and generalizations on infinite-dimensional manifolds [See also 22E65, 58D05.]
- 58B99 None of the above, but in this section

58Cxx Calculus on manifolds; nonlinear operators [See also 47Hxx.]
- 58C05 Real-valued functions
- 58C06 Set valued and function-space valued mappings
- 58C07 Continuity properties of mappings
- 58C10 Holomorphic maps [See also 32-XX.]
- 58C15 Implicit function theorems; global Newton methods
- 58C20 Differentiation theory (Gâteaux, Fréchet, etc.) [See also 26Exx, 46Gxx.]
- 58C25 Differentiable maps
- 58C27 Singularities of differentiable maps [See also 14B05, 14E15, 32Bxx, 32C40, 32C45.]
- 58C28 Catastrophes [See also 57R70, 58Exx.]
- 58C30 Fixed point theorems [See also 47H10.]
- 58C35 Integration on manifolds; measures on manifolds [See also 28Cxx.]
- 58C40 Spectral theory; eigenvalue problems
- 58C99 None of the above, but in this section

58Dxx Spaces and manifolds of mappings (including nonlinear versions of 46Exx)
- 58D05 Groups of diffeomorphisms and homeomorphisms as manifolds [See also 22E65, 57Q05.]
- 58D07 Groups and semigroups of nonlinear operators [See also 17B65, 47Dxx, 47H20.]
- 58D10 Spaces of imbeddings and immersions
- 58D15 Manifolds of mappings [See also 54C35.]
- 58D17 Manifolds of metrics (esp. Riemannian)
- 58D20 Measures (Gaussian, cylindrical, etc.) on manifolds of maps [See 28Cxx.]
- 58D25 Equations in function spaces; evolution equations [See also 34Gxx, 35K22, 35R15.]
- 58D30 Applications (in quantum mechanics (Feynman path integrals), relativity, fluid dynamics, etc.)
- 58D99 None of the above, but in this section

58Exx Variational problems in infinite-dimensional spaces
- 58E05 Abstract critical point theory (Morse theory, Ljusternik-Schnirelman (Šnirel'man) theory, etc.)
- 58E07 Abstract bifurcation theory
- 58E10 Applications to the theory of geodesics (problems in one independent variable)
- 58E11 Critical metrics
- 58E12 Applications to minimal surfaces (problems in two independent variables)
- 58E15 Application to extremal problems in several variables
- 58E17 Pareto optimality, etc., applications to economics
- 58E20 Harmonic maps
- 58E25 Applications to control theory (optimal and nonoptimal)
- 58E30 Variational principles
- 58E35 Variational inequalities (global problems)
- 58E99 None of the above, but in this section

58Fxx Ordinary differential equations on manifolds; dynamical systems {For abstract and topological dynamics, see also 28D10, 34C35, 34C40, 54H20.}
- 58F05 Hamiltonian and Lagrangian systems; symplectic geometry [See also 70Hxx.]
- 58F06 Geometric quantization (applications of representation theory)
- 58F07 Completely integrable systems (including systems with an infinite number of degrees of freedom)
- 58F09 Morse-Smale systems
- 58F10 Stability theory
- 58F11 Ergodic theory; invariant measures [See also 28Dxx.]
- 58F12 Structure of attractors (and repellors)
- 58F13 Strange attractors; chaos and other pathologies
- 58F14 Bifurcation theory and singularities
- 58F15 Hyperbolic structures (expanding maps, Anosov systems, etc.)
- 58F17 Geodesic flows
- 58F18 Relations with foliations
- 58F19 Eigenvalue and spectral problems
- 58F20 Periodic points and zeta functions
- 58F21 Limit cycles, etc.
- 58F22 Periodic solutions
- 58F25 Flows
- 58F27 Quasiperiodic flows
- 58F30 Perturbations
- 58F35 Invariance properties
- 58F40 Applications
- 58F99 None of the above, but in this section

58Gxx Partial differential equations on manifolds; differential operators [See also 35-XX.]
- 58G05 Differential complexes [See also 35Nxx.]; elliptic complexes
- 58G07 Relations with hyperfunctions
- 58G10 Index theory and fixed point theorems
- 58G11 Heat and other parabolic equation methods
- 58G12 Exotic index theories [See also 46L05, 46L10, 46M20.]
- 58G15 Pseudodifferential and Fourier integral operators on manifolds
- 58G16 Hyperbolic equations
- 58G17 Propagation of singularities; initial value problems
- 58G20 Boundary value problems
- 58G25 Spectral problems; spectral geometry; scattering theory
- 58G30 Relations with special manifold structures (Riemannian, Finsler, etc.)
- 58G32 Diffusion processes and stochastic analysis on manifolds
- 58G35 Invariance properties
- 58G40 Applications
- 58G99 None of the above, but in this section

58Hxx Pseudogroups and general structures on manifolds
- 58H05 Pseudogroups [See also 22E65.]
- 58H10 Cohomology of classifying spaces for pseudogroup structures (Spencer, Gel'fand-Fuks, etc.)
- 58H15 Deformations of structures [See also 32Gxx, 58G05.]
- 58H99 None of the above, but in this section

60–XX PROBABILITY THEORY AND STOCHASTIC PROCESSES {For additional applications, see 10Kxx, 62–XX, 90–XX, 92–XX, 93–XX, 94–XX. For numerical results, see 65U05.}
- 60–01 Elementary exposition, textbooks
- 60–02 Advanced exposition (research surveys, monographs, etc.)
- 60–03 Historical (must also be assigned at least one classification number from Section 01)
- 60–04 Explicit machine computation and programs (not the theory of computation or programming)
- 60–06 Proceedings, conferences, etc.

60Axx Foundations of probability theory
- 60A05 Axioms; other general questions
- 60A10 Probabilistic measure theory {For ergodic theory, see 28Dxx and 60Fxx.}
- 60A99 None of the above, but in this section

60Bxx Probability theory on algebraic and topological structures
- 60B05 Probability measures on topological spaces
- 60B10 Convergence of probability measures
- 60B11 Probability theory on linear topological spaces [See also 28C20.]
- 60B12 Limit theorems for vector-valued random variables (infinite-dimensional case)
- 60B15 Probability measures on groups, Fourier transforms, factorization
- 60B99 None of the above, but in this section

60C05 Combinatorial probability

60D05 Geometric probability, stochastic geometry, random sets [See also 52A22, 53C65.]

60Exx Distribution theory [See also 62Exx, 62Hxx.]
- 60E05 Distributions: general theory
- 60E07 Infinitely divisible distributions; stable distributions
- 60E10 Characteristic functions; other transforms
- 60E15 Inequalities (Čebyšev, Kolmogorov, etc.)
- 60E99 None of the above, but in this section

60Fxx Limit theorems [See also 28Dxx, 60B12.]
- 60F05 Central limit and other weak theorems
- 60F10 Large deviations
- 60F15 Strong theorems
- 60F17 Functional limit theorems; invariance theorems
- 60F20 Zero-one laws
- 60F25 L^p-limit theorems
- 60F99 None of the above, but in this section

60Gxx Stochastic processes
- 60G05 Foundations of stochastic processes
- 60G07 General theory of processes
- 60G10 Stationary processes
- 60G12 General second-order processes
- 60G15 Gaussian processes
- 60G17 Sample path properties
- 60G20 Generalized stochastic processes
- 60G25 Prediction theory [See also 62M20.]
- 60G30 Continuity and singularity of induced measures
- 60G35 Applications (signal detection, filtering, etc.) [See also 62M20, 94Axx.]
- 60G40 Stopping times; optimal stopping problems; gambling theory [See also 62L15.]
- 60G42 Martingales with discrete parameter
- 60G44 Martingales with continuous parameter
- 60G46 Martingales and classical analysis
- 60G48 Generalizations of martingales
- 60G50 Sums of independent random variables
- 60G55 Point processes
- 60G57 Random measures
- 60G60 Random fields
- 60G99 None of the above, but in this section

60Hxx Stochastic analysis [See also 58G32.]
- 60H05 Stochastic integrals
- 60H10 Stochastic ordinary differential equations [See also 34F05.]
- 60H15 Stochastic partial differential equations [See also 35R60.]
- 60H20 Stochastic integral equations
- 60H25 Random operators and equations
- 60H99 None of the above, but in this section

60Jxx Markov processes
- 60J05 Markov processes with discrete parameter
- 60J10 Markov chains with discrete parameter
- 60J15 Random walk
- 60J20 Applications of discrete Markov processes (social mobility, learning theory, industrial processes, etc.)
- 60J25 Markov processes with continuous parameter
- 60J27 Markov chains with continuous parameter
- 60J30 Processes with independent increments
- 60J35 Transition functions, generators and resolvents [See also 47D05, 47D07.]
- 60J40 Hunt processes
- 60J45 Probabilistic potential theory [See also 31–XX.]
- 60J50 Boundary theory
- 60J55 Local time and additive functionals
- 60J57 Multiplicative functionals
- 60J60 Diffusion processes [See also 58G32.]
- 60J65 Brownian motion [See also 58G32.]
- 60J70 Applications of diffusion theory (population genetics, absorption problems, etc.)
- 60J75 Jump processes
- 60J80 Branching processes (Galton-Watson, birth-and-death, etc.)
- 60J85 Applications of branching processes [See also 60K30, 92A10, 92A15.]
- 60J99 None of the above, but in this section

60Kxx Special processes
- 60K05 Renewal theory
- 60K10 Applications (reliability, demand theory, etc.)
- 60K15 Markov renewal processes, semi-Markov processes
- 60K20 Applications of Markov renewal processes (reliability, queueing networks, etc.) [See also 90B22, 90B25.]
- 60K25 Queueing theory [See also 68C15, 90B22.]
- 60K30 Applications (congestion, allocation, storage, traffic, etc.) [See also 60J80.]
- 60K35 Interacting random processes; statistical mechanics type models; percolation theory
- 60K99 None of the above, but in this section

62–XX STATISTICS {For numerical methods, see 65U05.}
- 62–01 Elementary exposition, textbooks
- 62–02 Advanced exposition (research surveys, monographs, etc.)
- 62–03 Historical (must also be assigned at least one classification number from Section 01)
- 62–04 Explicit machine computation and programs (not the theory of computation or programming)
- 62–06 Proceedings, conferences, etc.
- 62–07 Data analysis

62Axx Foundations
- 62A05 Invariance and group considerations
- 62A10 The likelihood approach
- 62A15 The Bayesian approach
- 62A20 The classical approach
- 62A25 The structural approach
- 62A30 The fiducial approach
- 62A99 None of the above, but in this section

62Bxx Sufficiency
- 62B05 Sufficient statistics and fields
- 62B10 Statistical information theory
- 62B15 Comparison of experiments
- 62B20 Measure-theoretic results, etc.
- 62B99 None of the above, but in this section

62Cxx Decision theory [See also 90A05; for game theory, see 90Dxx.]
62C05 General considerations
62C07 Complete class results
62C10 Bayesian problems; characterization of Bayes procedures
62C12 Empirical decision procedures
62C15 Admissibility
62C20 Minimax procedures
62C25 Compound decision problems
62C99 None of the above, but in this section

62D05 Sampling theory, sample surveys

62Exx Distribution theory [See also 60Exx.]
62E10 Characterization and structure theory
62E15 Exact distribution theory
62E20 Asymptotic distribution theory
62E25 Monte Carlo studies
62E30 Formal computational methods (polykays, etc.)
62E99 None of the above, but in this section

62Fxx Parametric inference
62F03 Hypothesis testing
62F04 Small sample properties of tests
62F05 Asymptotic properties of tests
62F07 Ranking and selection
62F10 Point estimation
62F11 Small sample properties of estimators
62F12 Asymptotic properties of estimators
62F15 Bayesian inference
62F25 Tolerance and confidence regions
62F35 Robustness and adaptive procedures
62F99 None of the above, but in this section

62Gxx Nonparametric inference
62G05 Estimation
62G10 Hypothesis testing
62G15 Tolerance and confidence regions
62G20 Asymptotic efficiency
62G25 Quick and easy methods
62G30 Order statistics; empirical distribution functions
62G99 None of the above, but in this section

62Hxx Multivariate analysis [See also 60Exx.]
62H05 Characterization and structure theory
62H10 Distribution of statistics
62H12 Estimation
62H15 Hypothesis testing
62H17 Contingency
62H20 Measures of association (correlation, canonical correlation, etc.)
62H25 Factor analysis and principal components
62H30 Classification and discrimination; cluster analysis [See also 68Gxx.]
62H99 None of the above, but in this section

62Jxx Regression and correlation
62J02 General nonlinear regression
62J05 Linear regression
62J07 Ridge regression; James-Stein estimators
62J10 Analysis of variance and covariance
62J15 Paired and multiple comparisons
62J99 None of the above, but in this section

62Kxx Experimental design [See also 05Bxx.]
62K05 Optimal designs
62K10 Block designs
62K15 Factorial designs
62K99 None of the above, but in this section

62Lxx Sequential methods
62L05 Sequential design
62L10 Sequential analysis
62L12 Sequential estimation
62L15 Optimal stopping [See also 60G40.]
62L20 Stochastic approximation
62L99 None of the above, but in this section

62Mxx Inference from stochastic processes
62M02 Markov processes: hypothesis testing
62M05 Markov processes: estimation
62M07 Non-Markovian processes: hypothesis testing
62M09 Non-Markovian processes: estimation
62M10 Time series, auto-correlation, regression, etc. [See also 90A20.]
62M15 Spectral analysis of time series
62M20 Prediction [See also 60G25.]; filtering [See also 60G35, 93E10, 93E11.]
62M99 None of the above, but in this section

62Nxx Engineering statistics
62N05 Reliability and life testing [See also 90B25.]
62N10 Quality control [See also 90Bxx.]
62N99 None of the above, but in this section

62Pxx Applications [See also 82–XX, 90–XX, 92–XX.]
62P05 Actuarial mathematics
62P10 Biometrics
62P15 Psychometrics
62P20 Econometrics [See also 90Axx.]
62P25 Sociometrics
62P99 None of the above, but in this section

62Q05 Statistical tables

65–XX NUMERICAL ANALYSIS

65–01 Elementary exposition, textbooks
65–02 Advanced exposition (research surveys, monographs, etc.)
65–03 Historical (must also be assigned at least one classification number from Section 01)
65–04 Explicit machine computation and programs (not the theory of computation or programming)
65–06 Proceedings, conferences, etc.

65A05 Tables

65Bxx Acceleration of convergence
65B05 Extrapolation to the limit, deferred corrections
65B10 Summation of series
65B15 Euler-Maclaurin formula
65B20 Poisson formula, etc.
65B99 None of the above, but in this section

65Cxx Numerical simulation {For theoretical aspects, see 68Jxx.}
65C05 Monte Carlo methods
65C10 Random number generation
65C20 Models, numerical methods
65C99 None of the above, but in this section

65Dxx Numerical approximation {Primarily algorithms; for theory, see 41–XX.}
65D05 Interpolation
65D07 Splines
65D10 Smoothing, curve fitting
65D15 Algorithms for functional approximation
65D20 Computation of special functions, construction of tables
65D25 Numerical differentiation
65D30 Numerical integration
65D32 Quadrature and cubature formulas
65D99 None of the above, but in this section

65E05 Numerical methods in complex analysis (potential theory, etc.) {For numerical methods in conformal mapping, see 30C30.}

65Fxx Numerical linear algebra
65F05 Direct methods for linear systems and matrix inversion
65F10 Iterative methods for linear systems [See also 65N20.]
65F15 Eigenvalues, eigenvectors
65F20 Overdetermined systems, pseudoinverses
65F25 Orthogonalization
65F30 Other matrix algorithms
65F35 Matrix norms, conditioning, scaling [See also 15A12, 15A60.]
65F40 Determinants
65F99 None of the above, but in this section

65Gxx Error analysis
65G05 Roundoff error
65G10 Interval and finite arithmetic
65G99 None of the above, but in this section

65Hxx Nonlinear algebraic or transcendental equations
65H05 Single equations
65H10 Systems of equations
65H15 Eigenvalues, eigenvectors
65H99 None of the above, but in this section

65Jxx Numerical analysis in abstract spaces
65J05 General
65J10 Equations with linear operators (do not use 65Fxx)
65J15 Equations with nonlinear operators (do not use 65Hxx)
65J99 None of the above, but in this section

65Kxx Mathematical programming, optimization and variational techniques [See also 49Dxx, 90Cxx, 93–XX.]
65K05 Mathematical programming
65K10 Optimization and variational techniques
65K99 None of the above, but in this section

65Lxx Ordinary differential equations
65L05 Initial value problems
65L07 Numerical investigation of stability of solutions
65L10 Boundary value problems
65L15 Eigenvalue problems
65L20 Stability of numerical methods
65L50 Mesh generation and refinement
65L60 Finite elements, Rayleigh-Ritz and Galerkin methods, finite methods
65L99 None of the above, but in this section

65Mxx Partial differential equations, initial value problems
65M05 Derivation of finite difference approximations
65M10 Stability and convergence of difference methods
65M15 Error bounds
65M20 Method of lines
65M25 Method of characteristics
65M30 Improperly posed problems
65M50 Mesh generation and refinement
65M60 Finite elements, Rayleigh-Ritz and Galerkin methods, finite methods
65M99 None of the above, but in this section

65Nxx Partial differential equations, boundary value problems
65N05 Derivation of finite difference approximations
65N10 Stability and convergence of difference methods
65N15 Error bounds
65N20 Solution of difference equations [See also 65F10.]
65N25 Eigenvalue problems
65N30 Finite elements, Rayleigh-Ritz and Galerkin methods, finite methods
65N35 Collocation and related methods
65N40 Methods of lines
65N45 Method of contraction of the boundary
65N50 Mesh generation and refinement
65N99 None of the above, but in this section

65P05 Partial differential equations, miscellaneous problems

65Q05 Difference and functional equations, recurrence relations

65Rxx Integral equations, integral transforms [See also 45Lxx.]
65R10 Integral transforms
65R20 Integral equations
65R99 None of the above, but in this section

65S05 Graphical methods

65T05 Harmonic analysis and synthesis

65U05 Numerical methods in probability and statistics

65V05 Automated algorithms [See also 68C05.]

68–XX COMPUTER SCIENCE (including AUTOMATA) {For papers involving machine computations and programs in a specific mathematical area, see section –04 in that area.}
68–01 Elementary exposition, textbooks
68–02 Advanced exposition (research surveys, monographs, etc.)
68–03 Historical (must also be assigned at least one classification number from Section 01)
68–04 Explicit machine computation and programs (not the theory of computation or programming)
68–06 Proceedings, conferences, etc.

68A05 Computers and computer systems

68Bxx Software
68B05 General theory of programming
68B10 Analysis of programs (schemata, semantics, correctness, etc.)
68B15 Theory of data (filing, etc.)
68B20 Supervisory systems, processing (serial, parallel, multi, structured, time-sharing operating systems)
68B99 None of the above, but in this section

68Cxx Metatheory (excluding automata)
68C01 Formal systems
68C05 Algorithms [See also 03–XX, 65V05.]
68C15 Queueing, scheduling [See also 60K25.]
68C20 Symbolic computation, algebraic computation
68C25 Computational complexity and efficiency of algorithms
68C30 Computable functions, unsolvability
68C40 Turing machines, abstract processors [See also 03D10.]
68C99 None of the above, but in this section

68Dxx Automata [See also 03D05, 18B20, 68F10.]
68D05 General theory
68D15 Linear automata, sequential machines
68D20 Tessellation automata, iterative arrays, cellular structure
68D22 Lindenmayer systems, D0L- and D1L-systems, etc. [See also 68F10, 92A05.]
68D25 Stochastic and nondeterministic automata
68D27 Playing automata, learning automata [See also 90Dxx, 68Gxx.]
68D30 Algebraic theory of automata [See also 18B20, 20M35.]
68D35 Other types of automata
68D37 Decomposition theory
68D40 Reduction problems
68D45 Realizable functions and regular events
68D50 Experiments, state-assignments
68D90 Transition nets
68D99 None of the above, but in this section

68Exx Discrete mathematics
68E05 Sorting, searching
68E10 Graph theory [See also 05Cxx.]
68E99 None of the above, but in this section

68Fxx Linguistics [See also 03B65.]
68F05 Formal languages, grammars
68F10 Automata in connection with languages [See also 03D05, 18B20, 68Dxx.]
68F15 Stochastic models
68F20 Semantics
68F25 Parsing
68F30 Translation of natural languages
68F99 None of the above, but in this section

68Gxx Artificial intelligence [See also 62H30, 68D27.]
68G05 Learning and adaptive systems
68G10 Pattern recognition, speech recognition
68G15 Theorem proving [See also 03B35.]
68G20 Problem solving
68G99 None of the above, but in this section

68H05 Information retrieval

68Jxx Simulation [See also 65Cxx.]
68J05 Simulation (analog, hybrid, etc.)
68J10 Modeling
68J99 None of the above, but in this section

68K05 Miscellaneous applications of computers

70–XX MECHANICS OF PARTICLES AND SYSTEMS {For relativistic mechanics, see 83A05 and 83C10; for statistical mechanics, see 82–XX.}
70–01 Elementary exposition, textbooks
70–02 Advanced exposition (research surveys, monographs, etc.)
70–03 Historical (must also be assigned at least one classification number from Section 01)
70–04 Explicit machine computation and programs (not the theory of computation or programming)

70–05 Experimental papers
70–06 Proceedings, conferences, etc.
70A05 Axiomatics, foundations
70Bxx Kinematics [See also 53A17.]
70B05 Kinematics of a particle
70B10 Kinematics of a rigid body
70B15 Mechanisms and linkages
70B99 None of the above, but in this section
70Cxx Statics
70C05 Forces, fields
70C10 Potential energy
70C99 None of the above, but in this section
70Dxx Dynamics of a particle [See also 70Hxx.]
70D05 Newtonian dynamics
70D10 Lagrangian dynamics
70D99 None of the above, but in this section
70Exx Dynamics of rigid bodies
70E05 Motion of the gyroscope
70E10 Motion of projectiles and rockets
70E15 Motion of a general rigid body
70E20 Perturbation methods for Euler's equations
70E25 Poinsot method
70E99 None of the above, but in this section
70Fxx Dynamics of a system of particles, including celestial mechanics
70F05 Two-body problem
70F07 Three-body problem
70F10 *n*-body problem
70F15 Celestial mechanics
70F20 Holonomic systems
70F25 Nonholonomic systems
70F30 Impulsive motion
70F35 Collisions
70F99 None of the above, but in this section
70Gxx General representations of dynamical systems [See also 58F05.]
70G05 Riemannian geometry, tensorial methods [See also 53A45, 53A50, 53B20.]
70G10 Generalized coordinates
70G15 Space of events
70G20 Impulse-energy space
70G25 Configuration space
70G30 State space
70G35 Phase space
70G99 None of the above, but in this section
70Hxx Hamiltonian and Lagrangian mechanics [See also 58F05.]
70H05 Hamilton's equations
70H10 Liouville's theorem
70H15 Canonical transformations
70H20 Hamilton-Jacobi equations
70H25 Hamilton's principle
70H30 Other variational principles
70H35 Lagrange's equation of motion
70H99 None of the above, but in this section
70Jxx Linear vibration theory
70J05 Finite degree of freedom systems
70J10 Normal modes of vibrations
70J15 Conservative systems
70J20 Nonconservative systems
70J25 Stability
70J99 None of the above, but in this section
70Kxx Nonlinear motions [See also 34Cxx, 58Fxx.]
70K05 Phase plane analysis
70K10 Limit cycles
70K15 Ljapunov theorems
70K20 Stability
70K30 Nonlinear resonances
70K40 Forced motions
70K50 Transition to stochasticity [See also 58F13.]
70K99 None of the above, but in this section
70L05 Random vibrations [See also 93Exx.]
70Mxx Orbital mechanics
70M05 Satellite problems
70M10 Orbital stability
70M99 None of the above, but in this section
70N05 Exterior ballistics
70P05 Variable mass, rockets
70Q05 Control of mechanical systems [See also 49Exx, 90D25, 90D26, 93Cxx, 93Dxx.]

73–XX MECHANICS OF SOLIDS

73–01 Elementary exposition, textbooks
73–02 Advanced exposition (research surveys, monographs, etc.)
73–03 Historical (must also be assigned at least one classification number from Section 01)
73–04 Explicit machine computation and programs (not the theory of computation or programming)
73–05 Experimental papers
73–06 Proceedings, conferences, etc.
73A05 Axiomatics, foundations
73Bxx Continuum mechanics {For fluids, see 76Axx.}
73B05 Constitutive equations
73B10 Isotropic functionals
73B15 Rotational groups [See also 22Exx.]
73B20 Simple materials
73B25 Multipolar stress theory
73B30 Thermodynamics of solids [See also 73U05; for gases and fluids, see 80–XX.]
73B35 Random materials
73B99 None of the above, but in this section
73Cxx Elasticity {For the biharmonic equation, see 31A30, 31B30; for acoustics, see 76Q05.}
73C02 Classical linear elasticity
73C03 Complex variable techniques
73C05 Stress functions
73C10 Saint-Venant's principle
73C15 Uniqueness theorems
73C20 Strain energy methods
73C25 Thermal stress problems
73C30 Anisotropic bodies
73C35 Mixed boundary value problems [See also 45F05.]
73C40 Nonhomogeneous bodies and inclusions
73C45 Stress concentrations
73C50 Nonlinear elasticity
73C60 Variational methods [See also 35J85, 35K85, 35L85, 49A29.]
73C99 None of the above, but in this section
73Dxx Wave propagation in and vibrations of solids
73D05 Impact and explosion problems [See also 76L05.]
73D10 Integral transforms
73D15 Dilatational and shear waves
73D20 Surface waves
73D25 Wave diffraction and dispersion
73D30 Linear vibrations [See also 70Jxx.]
73D35 Nonlinear vibrations [See also 70Kxx.]
73D50 Inverse problems [See also 35Lxx, 35R30.]
73D70 Random waves
73D99 None of the above, but in this section
73Exx Plasticity
73E05 Yield criteria and flow rules
73E10 Method of successive approximations
73E15 Slip-line theory
73E20 Limit analysis
73E25 Creep
73E50 Time-dependent problems
73E99 None of the above, but in this section
73Fxx Viscoelasticity
73F05 Creep and relaxation functions
73F10 Correspondence principle
73F15 Time-dependent boundary value problems
73F20 Aging of materials
73F25 Environmental-dependent materials

73F99 None of the above, but in this section

73Gxx Finite deformations
73G05 Finite elasticity
73G10 Strain energy functions
73G15 Finite viscoelasticity
73G20 Metal forming problems
73G99 None of the above, but in this section

73Hxx Stability (linear and nonlinear)
73H05 Buckling
73H10 Dynamic stability
73H99 None of the above, but in this section

73Jxx Aero- and hydroelasticity
73J05 Interaction of aerodynamics and elasticity
73J06 Interaction of hydrodynamics and elasticity
73J10 Vibrations, flutter
73J15 Divergence
73J99 None of the above, but in this section

73Kxx Structural mechanics
73K03 Strings
73K05 Beams, columns, rods
73K10 Plates, discs
73K12 Vibrations of beams, plates, etc.
73K15 Membranes, shells
73K20 Composite structures and materials
73K25 Finite element methods
73K30 Other numerical methods
73K35 Random excitation
73K40 Optimization
73K99 None of the above, but in this section

73Lxx Theory of shells
73L05 Non-Euclidean geometry, tensorial methods [See also 53A45.]
73L10 Anisotropic shells
73L15 Shell dynamics
73L20 Vibrations of shells
73L99 None of the above, but in this section

73Mxx Fractural mechanics
73M05 Brittle fracture, cracks
73M10 Fatigue
73M15 Ductile fracture
73M20 Material instability
73M99 None of the above, but in this section

73Nxx Geophysical solid mechanics [See also 86–XX.]
73N05 Global dynamics
73N10 Earthquake problems
73N99 None of the above, but in this section

73Pxx Biomechanics of solids
73P05 Mathematical models of biological materials
73P10 Mechanics response
73P99 None of the above, but in this section

73Q05 Soil mechanics

73R05 Electromagnetic elasticity

73Sxx Micromechanics of solids
73S05 Dislocation theory
73S99 Other micromechanics

73T05 Contact problems

73U05 Thermomechanics of solids [See also 73B30.]

76–XX FLUID MECHANICS {For general continuum mechanics, see 73Bxx, or other parts of 73–XX.}

76–01 Elementary exposition, textbooks
76–02 Advanced exposition (research surveys, monographs, etc.)
76–03 Historical (must also be assigned at least one classification number from Section 01)
76–04 Explicit machine computation and programs (not the theory of computation or programming)
76–05 Experimental papers
76–06 Proceedings, conferences, etc.

76Axx Foundations, constitutive equations, rheology [See also 35L65.]
76A02 Foundations
76A05 Non-Newtonian fluids
76A10 Viscoelastic fluids
76A60 Computational methods
76A99 None of the above, but in this section

76Bxx Incompressible inviscid fluids, potential theory
76B05 Airfoil theory
76B10 Jets and cavities, cavitation, free-streamline theory, water-entry problems, hydrofoil theory
76B15 Water waves, gravity waves; dispersion and diffraction, nonlinear interaction
76B20 Ship waves
76B25 Solitary and cnoidal waves
76B35 Random waves
76B40 Added mass computations
76B99 None of the above, but in this section

76Cxx Incompressible inviscid fluids, vorticity flows
76C05 Vorticity flows
76C10 Internal waves
76C15 Atmospheric waves
76C20 Rossby waves
76C99 None of the above, but in this section

76Dxx Incompressible viscous fluids
76D05 Navier-Stokes equations [See also 35Q10.]
76D07 Stokes flows
76D10 Boundary-layer theory
76D15 Boundary-layer separation and reattachment
76D20 Higher-order effects in boundary layers
76D25 Wakes and jets
76D30 Singular perturbation problems
76D35 Random waves
76D99 None of the above, but in this section

76Exx Hydrodynamic stability
76E05 Stability of parallel flows
76E10 Inertial instability
76E15 Convective instability
76E20 Instability of geophysical and astrophysical flows
76E25 Magnetohydrodynamic and electrohydrodynamic instabilities
76E30 Nonlinear effects
76E99 None of the above, but in this section

76Fxx Turbulence [See also 58F13, 58F27, 60Gxx, 60Jxx.]
76F05 Homogeneous isotropic turbulence
76F10 Shear flows
76F99 None of the above, but in this section

76Gxx General aerodynamics and subsonic flows
76G05 Hodograph methods
76G10 Kármán-Tsien approximation
76G15 Iterative methods
76G20 Free-streamline theory
76G99 None of the above, but in this section

76H05 Transonic flows, limit lines

76Jxx Supersonic flows
76J05 Hodograph methods
76J10 Method of characteristics
76J99 None of the above, but in this section

76K05 Hypersonic flows

76L05 Shock waves and blast waves [See also 73D05.]

76M05 Nonhomentropic flows of compressible fluids

76Nxx Compressible fluids and gas dynamics, general
76N05 Boundary layer theory
76N10 Compressible fluids, general
76N15 Gas dynamics, general
76N99 None of the above, but in this section

76P05 Rarefied gas flows, Boltzmann equation [See also 82A05.]

76Q05 Hydrodynamic sound, acoustics

76Rxx Diffusion and convection [See also 60J60.]
76R05 Forced convection
76R10 Free convection
76R99 None of the above, but in this section

76S05 Flows in porous media; filtration; seepage
76T05 Two-phase and multiphase flows
76U05 Rotating fluids
76V05 Stratified and reacting fluids
76W05 Magnetohydrodynamics and electrohydrodynamics
76X05 Ionized gas flow in electromagnetic fields; plasmic flow
76Y05 Quantum hydrodynamics and relativistic hydrodynamics [See also 83C55, 85A30.]
76Zxx Biological fluid mechanics
76Z05 Physiological flows
76Z10 Biopropulsion in water and in air
76Z99 None of the above, but in this section

78–XX OPTICS, ELECTROMAGNETIC THEORY {For quantum optics, see 81K05.}
78–01 Elementary exposition, textbooks
78–02 Advanced exposition (research surveys, monographs, etc.)
78–03 Historical (must also be assigned at least one classification number from Section 01)
78–04 Explicit machine computation and programs (not the theory of computation or programming)
78–05 Experimental papers
78–06 Proceedings, conferences, etc.
78A02 Foundations
78A05 Geometric optics
78A10 Physical optics
78A15 Electron optics
78A20 Space charge waves
78A25 Electromagnetic theory, general
78A30 Electro- and magnetostatics
78A35 Motion of charged particles
78A40 Waves and radiation
78A45 Diffraction, scattering [See also 34E20 for WKB methods.]
78A50 Antennas, wave-guides
78A55 Technical applications
78A60 Lasers, masers, optical bistability [See also 81K05.]
78A70 Biological applications [See also 92A09, 92A27.]
78A97 Mathematically heuristic optics and electromagnetic theory (must also be assigned at least one other classification number in this section)
78A99 Miscellaneous topics

80–XX CLASSICAL THERMODYNAMICS, HEAT TRANSFER {For thermodynamics of solids, see 73B30.}
80–01 Elementary exposition, textbooks
80–02 Advanced exposition (research surveys, monographs, etc.)
80–03 Historical (must also be assigned at least one classification number from Section 01)
80–04 Explicit machine computation and programs (not the theory of computation or programming)
80–05 Experimental papers
80–06 Proceedings, conferences, etc.
80A05 Foundations
80A10 Classical thermodynamics
80A15 Thermodynamics of mixtures
80A20 Heat and mass transfer
80A25 Combustion, interior ballistics
80A30 Chemical kinetics [See also 92A09, 92A40.]
80A32 Chemically reacting flows [See also 92A09, 92A40.]
80A35 Mathematically heuristic classical thermodynamics (must also be assigned at least one other classification number in this section)
80A99 Miscellaneous topics

81–XX QUANTUM MECHANICS
81–01 Elementary exposition, textbooks
81–02 Advanced exposition (research surveys, monographs, etc.)
81–03 Historical (must also be assigned at least one classification number from Section 01)
81–04 Explicit machine computation and programs (not the theory of computation or programming)
81–05 Experimental papers
81–06 Proceedings, conferences, etc.

81Bxx Axiomatics, foundations, philosophy
81B05 General
81B10 Logical foundations of quantum mechanics
81B99 None of the above, but in this section

81Cxx General mathematical topics and methods in quantum mechanics
81C05 Closed and approximate solutions to the Schrödinger, Dirac, Klein-Gordon and other quantum mechanical equations
81C10 Selfadjoint operator theory in quantum mechanics; essential selfadjointness of the Hamiltonian
81C12 Perturbation theory for operators
81C15 Perturbation theory for differential equations; WKB techniques
81C20 Probabilistic methods in quantum mechanics, including stochastic electrodynamics
81C30 Feynman integrals and graphs; applications of algebraic topology and algebraic geometry to these problems [See also 14D05, 32B30.]
81C35 Path integrals [See also 28C20, 58D30.]
81C40 General group representations motivated by physics but not covered by Section 81Gxx below; representations of concrete classical groups such as SL(n,C), U(p,q), etc. [See also 20C35, 22E70.]
81C99 None of the above, but in this section

81Dxx General quantum mechanics
81D05 Commutation relations
81D10 Bethe-Salpeter equation
81D15 Current algebra
81D20 Broken symmetries
81D25 Covariant wave equations
81D30 Coherent states
81D99 None of the above, but in this section

81Exx Quantum field theory
81E05 Axiomatic quantum field theory; operator algebras
81E10 Constructive quantum field theory; models of quantum fields (including Yang-Mills theories)
81E15 Renormalization theory
81E20 Field theory on curved space backgrounds [See also 83C47.]
81E25 Lattice theories
81E99 None of the above, but in this section

81Fxx Scattering theories
81F05 2-body potential scattering theory [See also 34E20 for WKB methods.]
81F10 n-body potential scattering theory
81F15 S-matrix theory, etc.
81F20 Particle scattering theories
81F30 Dispersion theory, dispersion relations
81F99 None of the above, but in this section

81Gxx Particle physics (this covers all kinds of particles and interactions)
81G05 Strong interaction
81G10 Electromagnetic interaction
81G15 Weak interaction
81G20 Application of group theory to elementary particles, including grand unification and supersymmetry {For supergravity, see 83E50.}
81G25 Other elementary particle theory
81G30 Applications of group theory to nuclear physics
81G35 Other nuclear physics
81G40 Applications of group theory to atomic physics
81G45 Other atomic physics
81G50 Applications of group theory to molecular physics
81G55 Other molecular physics
81G99 None of the above, but in this section

81Hxx Quantum mechanics of many-body systems
81H10 Nuclear structure [See also 81G35.]
81H20 Solid state band theory
81H99 None of the above, but in this section

81J05 Superconductivity and superfluidity

81K05 Quantum optics

81L05 Quantum electrodynamics
81M05 Relativistic theory
81N05 Mathematically heuristic quantum mechanics (must also be assigned at least one other classification number in this section)

82–XX STATISTICAL PHYSICS, STRUCTURE OF MATTER

82–01 Elementary exposition, textbooks
82–02 Advanced exposition (research surveys, monographs, etc.)
82–03 Historical (must also be assigned at least one classification number from Section 01)
82–04 Explicit machine computation and programs (not the theory of computation or programming)
82–05 Experimental papers
82–06 Proceedings, conferences, etc.
82A05 Mathematical general statistical mechanics
82A15 Mathematical quantum statistical mechanics
82A25 Phase transitions
82A30 Statistical thermodynamics [See also 80–XX.]
82A31 Stochastic methods
82A35 Irreversible thermodynamics, including Onsager-Machlup theory
82A40 Kinetic theory of gases
82A42 Random media
82A43 Percolation
82A45 Plasma
82A50 Liquids
82A51 Polymers
82A55 Solids
82A57 Disordered materials, including liquid crystals and spin glasses
82A60 Crystals {For crystallographic group theory, see 20H15.}
82A65 Metals
82A67 Lattice statistics
82A68 Lattice models
82A70 Transport processes [See also 85A25.]
82A75 Nuclear reactor theory
82A77 Mathematically heuristic statistical physics (must also be assigned at least one other classification number in this section)
82A99 Miscellaneous topics

83–XX RELATIVITY

83–01 Elementary exposition, textbooks
83–02 Advanced exposition (research surveys, monographs, etc.)
83–03 Historical (must also be assigned at least one classification number from Section 01)
83–04 Explicit machine computation and programs (not the theory of computation or programming)
83–05 Experimental papers
83–06 Proceedings, conferences, etc.
83A05 Special relativity
83B05 Observational and experimental questions
83Cxx General relativity
83C05 Einstein's equations
83C10 Equations of motion
83C15 Closed form solutions
83C20 Classes of solutions
83C25 Approximation procedures, weak fields
83C30 Asymptotic procedures (radiation, news functions, etc.)
83C35 Gravitational waves
83C40 Groups of motions, invariance groups, conservation laws, etc.
83C45 Quantization of the gravitational field
83C47 Quantum field theory on curved space-times [See also 81E20.]
83C50 Electromagnetic fields
83C55 Hydrodynamics [See also 76Y05.]
83C99 None of the above, but in this section
83D05 Relativistic gravitational theories other than Einstein's
83Exx Unified field theories
83E05 Geometrodynamics
83E10 Asymmetric field theories
83E15 Five- and higher-dimensional theories
83E50 Supergravity {For supersymmetry, see 81G20.}
83E99 None of the above, but in this section
83F05 Cosmology

85–XX ASTRONOMY AND ASTROPHYSICS {For celestial mechanics, see 70F15.}

85–01 Elementary exposition, textbooks
85–02 Advanced exposition (research surveys, monographs, etc.)
85–03 Historical (must also be assigned at least one classification number from Section 01)
85–04 Explicit machine computation and programs (not the theory of computation or programming)
85–05 Experimental papers
85–06 Proceedings, conferences, etc.
85A04 General
85A05 Galactic and stellar dynamics
85A10 Astronautics
85A15 Stellar structure
85A20 Stellar atmospheres
85A25 Radiative transfer
85A30 Hydrodynamic and hydromagnetic problems [See also 76Y05.]
85A35 Statistical astronomy
85A40 Cosmology {For relativistic cosmology, see 83F05.}
85A45 Radio astronomy
85A99 Miscellaneous topics

86–XX GEOPHYSICS [See also 73Nxx, 76U05, 76V05.]

86–01 Elementary exposition, textbooks
86–02 Advanced exposition (research surveys, monographs, etc.)
86–03 Historical (must also be assigned at least one classification number from Section 01)
86–04 Explicit machine computation and programs (not the theory of computation or programming)
86–05 Experimental papers
86–06 Proceedings, conferences, etc.
86A04 General
86A05 Hydrology, hydrography, oceanography [See also 76B15, 76B20, 76B25, 76C15, 76E20, 76Q05, 76Rxx, 76U05.]
86A10 Meteorology [See also 76Bxx, 76C15, 76E20, 76N15, 76Q05, 76Rxx, 76U05, 76V05.]
86A15 Seismology [See also 73Dxx, 73Fxx, 73Mxx, 73Nxx, 73Q05.]
86A20 Potentials, prospecting [See also 76S05, 76W05.]
86A25 Geo-electricity and geomagnetism [See also 78A25.]
86A30 Geodesy, mapping problems
86A35 Atmospheric physics [See also 76C15, 76C20, 76E20, 76Rxx, 76U05, 76V05.]
86A60 Geological problems
86A99 Miscellaneous topics

90–XX ECONOMICS, OPERATIONS RESEARCH, PROGRAMMING, GAMES

90–01 Elementary exposition, textbooks
90–02 Advanced exposition (research surveys, monographs, etc.)
90–03 Historical (must also be assigned at least one classification number from Section 01)
90–04 Explicit machine computation and programs (not the theory of computation or programming)
90–06 Proceedings, conferences, etc.
90Axx Mathematical economics {For econometrics, see 62P20.}
90A05 Decision theory [See also 62Cxx, 90B50, 90D35.]
90A06 Preferences
90A07 Theory of group behavior
90A08 Social choice, voting
90A09 Portfolio theory and financial economics
90A10 Utility theory
90A11 Production models
90A12 Price theory
90A14 Equilibrium theory
90A15 Static economic models
90A16 Dynamic economic models

90A17 Multisectoral models
90A19 Statistical models
90A20 Economic time series analysis [See also 62M10.]
90A30 Applications to problems of human society (air pollution, etc.)
90A99 None of the above, but in this section

90Bxx Operations research and management science
90B05 Logistics, inventory, storage
90B10 Flows in networks, deterministic
90B15 Flows in networks, probabilistic
90B20 Highway traffic
90B22 Queueing theory, service models, etc. [See also 60K25.]
90B25 Reliability and maintenance [See also 60K20, 62N05.]
90B30 Production theory
90B35 Scheduling theory
90B40 Search theory
90B50 Decision theory, including multiple objectives [See also 90A05, 90C31, 90D35.]
90B99 None of the above, but in this section

90Cxx Mathematical programming {For papers emphasizing calculus of variations or involving abstract spaces, see 49Dxx. For numerical methods, see 65K05.}
90C05 Linear programming
90C06 Large scale linear programming
90C08 Special problems of linear programming (transportation and multi-index problems, etc.)
90C09 Boolean programming
90C10 Integer programming
90C11 Mixed integer programming
90C15 Programming in conditions of uncertainty, stochastic programming
90C20 Quadratic programming
90C25 Convex programming
90C30 Nonlinear programming
90C31 Sensitivity, parametric programming, multi-objective programming
90C32 Fractional programming
90C33 Linear and nonlinear complementarity problems
90C35 Network programming, programming in networks
90C39 Dynamic programming [See also 49Cxx.]
90C40 Markov decision processes; Markov programming and Markov renewal programming
90C48 Programming in abstract spaces
90C50 Applications of mathematical programming
90C99 None of the above, but in this section

90Dxx Game theory [See also 49A45, 68D27.]
90D05 2-person games
90D10 *n*-person games, noncooperative
90D12 *n*-person games, cooperative, solution concepts
90D13 Infinite games
90D15 Multistage games, stochastic [See also 93E05.]
90D20 Multistage games, recursive
90D25 Differential games
90D26 Pursuit and evasion games
90D30 Utility theory [See also 90A10.]
90D35 Decision theory [See also 62Cxx, 90A05, 90B50.]
90D40 Game theory models [See also 65Cxx, 68Cxx, 68Jxx.]
90D42 Positional and lattice games
90D45 Applications of game theory
90D99 None of the above, but in this section

92–XX BIOLOGY AND BEHAVIORAL SCIENCES
92–01 Elementary exposition, textbooks
92–02 Advanced exposition (research surveys, monographs, etc.)
92–03 Historical (must also be assigned at least one classification number from Section 01)
92–04 Explicit machine computation and programs (not the theory of computation or programming)
92–06 Proceedings, conferences, etc.
92A05 General biology [See also 73–XX, 76–XX, in particular 73Pxx, 76Zxx.]
92A07 Medical applications of biology
92A09 Physiology, biochemistry [See also 76–XX, in particular 76Zxx, and 78A70, 80A30, 80A32, 92A27, 92A40.]
92A10 Genetics
92A15 Population dynamics, epidemiology
92A17 Ecology
92A20 Sociology
92A25 Psychology
92A27 Psychophysics, psychophysiology [See also 92A09.]
92A40 Chemistry [See also 80A30, 80A32, 92A05, 92A09.]
92A90 Other applications

93–XX SYSTEMS THEORY; CONTROL {For optimal control, see 49–XX.}
93–01 Elementary exposition, textbooks
93–02 Advanced exposition (research surveys, monographs, etc.)
93–03 Historical (must also be assigned at least one classification number from Section 01)
93–04 Explicit machine computation and programs (not the theory of computation or programming)
93–06 Proceedings, conferences, etc.

93Axx General
93A05 Axiomatic system theory
93A10 General systems
93A13 Hierarchical systems
93A15 Large scale systems
93A20 Cascaded systems
93A99 None of the above, but in this section

93Bxx Controllability, observability, and system structure
93B05 Controllability
93B07 Observability
93B10 Canonical structure
93B15 Realizability of systems from input-output data
93B17 Transformation
93B20 Minimal systems representations
93B25 Algebraic theory of time-invariant systems
93B30 System identification
93B35 Sensitivity
93B40 Computational methods
93B50 Synthesis problems
93B55 Pole and zero placement problems
93B99 None of the above, but in this section

93Cxx Control systems, guided systems
93C05 Linear
93C10 Nonlinear
93C15 Systems governed by ordinary differential equations
93C20 Systems governed by partial differential equations
93C22 Systems governed by integral equations
93C25 Systems in abstract spaces
93C30 Systems governed by functional relations other than differential or integral equations
93C35 Multivariable systems
93C40 Adaptive
93C45 Time-invariant
93C50 Time-dependent
93C55 Discrete-time
93C57 Sampled-data
93C60 Continuous-time
93C99 None of the above, but in this section

93Dxx Stability
93D05 Ljapunov stability
93D10 Popov-type stability of feedback systems
93D15 Stabilization of systems by feedback
93D20 Asymptotic stability
93D25 Input-output approaches
93D99 None of the above, but in this section

93Exx Stochastic systems and control
93E03 Stochastic systems, general
93E05 Stochastic games, stochastic differential games
93E10 Estimation and detection
93E11 Filtering
93E12 System identification
93E14 Data smoothing
93E15 Stochastic stability
93E20 Optimal stochastic control

93E25 Computational methods
93E99 None of the above, but in this section

94–XX INFORMATION AND COMMUNICATION, CIRCUITS

94–01 Elementary exposition, textbooks
94–02 Advanced exposition (research surveys, monographs, etc.)
94–03 Historical (must also be assigned at least one classification number from Section 01)
94–04 Explicit machine computation and programs (not the theory of computation or programming)
94–06 Proceedings, conferences, etc.

94Axx Communication, information
94A05 Communication theory [See also 60G35.]
94A11 Application of orthogonal functions in communication
94A12 Characterization of signals
94A14 Modulation and demodulation
94A15 Information theory, general [See also 62B10.]
94A17 Measures of information, entropy
94A24 Coding theorems (Shannon theory)
94A29 Source coding
94A34 Distortion theory
94A40 Channel theory
94A50 Theory of questionnaires
94A99 None of the above, but in this section

94Bxx Algebraic theory of error-correcting codes
94B05 Linear codes, general
94B10 Convolutional codes
94B15 Cyclic codes
94B20 Burst-correcting codes
94B25 Combinatorial codes
94B30 Majority codes
94B35 Decoding
94B40 Arithmetic codes
94B45 Prefix, length-variable, comma-free codes
94B50 Synchronization error-correcting codes
94B60 Other types of codes
94B70 Error probability
94B99 None of the above, but in this section

94Cxx Circuits, networks
94C05 Analytic circuit theory
94C10 Switching theory, applications of Boolean algebra
94C15 Applications of graph theory [See also 05Cxx, 68D90, 68E10.]
94C30 Applications of design theory [See also 05Bxx.]
94C99 None of the above, but in this section

94D05 Fuzzy sets and logic (in connection with questions of Section 94) [See also 03B52, 03E72.]

ERRATA AND ADDENDA

54 #10924: Jakimovski, A.; Russell, D. C.
The following should be substituted for the original review:
Authors' summary: "It is the first purpose of this paper to obtain simple order conditions which hold for certain sequences of continuous linear functionals on a Fréchet space with a Schauder basis, and to investigate best-possible order conditions. We then specialize the results to Banach spaces and to summability fields of matrices. By using results on summability fields and absolute summability fields of Riesz typical means and generalized Cesàro means, some of them new, we are able to obtain some best-possible order conditions in these fields; in particular, we can specify the best-possible limitation theorems for a sequence (or series) which is limitable, or absolutely limitable, by the Riesz method. We then apply our limitation theorems to obtain two equivalence theorems, of 'high-indices' type, for ordinary and absolute Riesz summability. Finally, we can obtain improved forms of two inclusion theorems which specify necessary and sufficient conditions for an arbitrary matrix method to include the ordinary or absolute Riesz methods."

55 #7672: Filloy, Eugenio
In line 5 "basic" should read "base".

57 #5616: Haimovici, Adolf
The editorial review should not be interpreted to mean that there was any antagonism between Gr. C. Moisil and Alexandru Myller.

57 #9545: Hanazawa, Masazumi
Lemmas 1, 5 and 7, together with the induction axiom, are correct as stated in the original article. (The claims made in the original review are withdrawn.)

58 #2039ab: Srivastava, H. M. [Srivastava, Harim]; Panda, Rekha [Srivastava, Rekha]
The bracketed form of the first author's name should read "[Srivastava, Hari M.]".

58 #6099: Liu, Wen
In the penultimate line the condition should read: $\limsup_{x'\to x-0} f[|\varphi(x')-\varphi(x)|]/(x'-x)=+\infty$.

58 #7210: Mamedov, K. Š.
58 #11747: Jakubov, S. Ja.; Karasik, B. G.; Mamedov, K. Š.
58 #23763: Mamedov, K. Š.
The author's name should read "Mamedov, K. S."

58 #8111: Huang, Jun S. [Huang, Chün Hsiung]; Yank, Mark C. K.
The second author's name should read "Yang, Mark C. K. "

58 #11126: Phillips, Richard E.; Wilson, John S.
In line 5 "Then (a) G satisfies..." should read "Then the following are equivalent: (a) G satisfies...". In line 7 "locally finite by nilpotent" should read "locally (finite by nilpotent)".

58 #14300: Sturges, Leroy D.; Joseph, Daniel D.
The first reference should read: "In parts I and II of this paper [the second author and Gordon S. Beavers, Arch. Rational Mech. Anal. **62** (1976), no. 4, 323–352]". The second reference should read: "[op. cit.]".

58 #16479: Nathanson, Melvyn B.
In line −2 "squarefree" should read "square-full".

58 #20931: The Chauvenet papers. Vol. I
The review includes the table of contents of both Vol. I and Vol. II. The title should read "The Chauvenet papers. Vol. I, II" and the paging should read "xviii+312+11 pp.; pp. i–viii and 313–595 and 1–11".

58 #22756: Grigor'eva, N. S.
Several lines were inadvertently omitted from the review. The full text of the review should read as follows:
"The author considers two ordinary differential equations with the real parameter λ: the Mathieu equation $d^2y/d\eta^2+h^2(\sin^2\eta-\lambda)y=0$, $0\leqslant\eta\leqslant 2\pi$, and the modified Mathieu equation $d^2H/d\xi^2+h^2(\sinh^2\xi+\lambda)H=0$, $0\leqslant\xi<+\infty$. Using the method of so-called model equations, she gives the uniform asymptotic expansions for $h\to+\infty$ of the exponentially decreasing solutions $H_\lambda^{\pm}(\xi)$ of the modified Mathieu equation and of the Floquet solutions $y_\lambda^{\pm}(\eta)$ of the Mathieu equation."

58 #27325: Fine, Kit
58 #27349: Thomason, S. K.
In the heading "no. 2" should read "no. 1".

58 #33206: Kistauri, È. I.
The results of the present paper do not actually follow directly from the paper by Zakharin referred to in the review.

80a:10036: Orde, H. L. S.
The reviewer's assertion that "the main steps of the proof are the same as in the classical proof of Dirichlet, and the proof is more analytic than arithmetic" is questionable. His assertion that "an elementary and purely arithmetic proof of Dirichlet's class number formula was given by B. A. Venkov" is incorrect, since Venkov's proof was not intended to cover all cases.
The author states in his introduction:
"We propose here to give a quite different and much shorter arithmetic proof which applies to all negative discriminants. The main interest of this proof lies perhaps in the fact that it provides an intuitive explanation for the structure of Dirichlet's expression, because the result is obtained almost immediately without the need for any of the intermediate transformations which occur in the usual proofs, even if a certain amount of detail of a routine kind is needed to confirm that the arguments which are suggested by intuition are valid."

80b:20079: Lajos, Sándor
Lines 5–10, beginning with "A semigroup S is (1)" and ending with "(that is, $AS=SA=A$), respectively", should read: "A semigroup S is (1) a semilattice of groups, (2) a semilattice of left groups and (3) a homogroup if and only if (a) $B(S)$ is a regular monoid, (b) $B(S)$ is a regular semigroup having S as a right identity and (c) $B(S)$ has a zero element, respectively. The bi-ideal semigroup $B(S)$ of a semigroup S is a monoid if and only if (i) every A of $B(S)$ is a two-sided ideal of S, and (ii) every two-sided ideal I of S is complete (that is, $IS=SI=I$)."

80b:22019: **Wallach, Noland R.**
The author's name should read "Wallach, Nolan R."

80b:68061: **Halatsis, Constantinos [Halatsis, Constantine]; Gaitanis, Nicholas [Gaitanis, Nicolaos]**
80b:94043: **Papakonstantinou, G.**
80d:68069: **Silio, Charles B., Jr.**
80e:62045: **Niemann, Heinrich; Weiss, Jürgen**
The citation should read "IEEE Trans. Comput. **28** (1979)...".

80c:52004: **Clarke, R. J.**
Unfortunately the review of paper 80a:52004 by Jorge H. Nanclares and Fausto H. Toranzos was erroneously reprinted as the review of the above paper by R. J. Clarke. In fact Clarke's paper is totally unrelated to that of Nanclares and Toranzos. Clarke's paper deals instead with the sequence of polygons obtained from a given one by iterating the operation of replacing a polygon by the polygon whose vertices are the midpoints of the sides of the previous one. Other ratios of subdivision of the sides of a polygon other than bisection are also considered.

80c:76027: **Buleyev, N. I. [Bulejev, N. I.]**
80e:76029: **Taganov, G. I.; Dudoladov, I. V.**
80i:76024: **Golovin, A. M.**
80j:76035: **Korneyev, A. I. [Korneev, A. I.]**
80j:76036: **Belotserkovskiy, S. M. [Belocerkovskiĭ, S. M.]; Nisht, M. I. [Nist, M. I.]**
80j:76039: **Onufriyev, A. T. [Onufriev, A. T.]**
80j:76041: **Struminskiy, V. V. [Struminskiĭ, V. V.]**
80j:82016: **Belotserkovskiy, O. M. [Belocerkovskiĭ, O. M.]; Yanitskiy, V. Ye. [Janickiĭ, V. E.]**
The following line should be included in the heading: "Third All-Union Seminar on Turbulent Flows, Part I".

80c:78016: **Litzman, O.**
In the heading "no. 2" should read "no. 6".

80d:01019: **Kanevskiĭ, A. Ja. [Kanevskis, A.]**
The author's bracketed name should read "[Kanevskiĭ, A. Ja.]".

80d:52001: **Харазишвили, А. Б. [Harazišvili, A. B.]**
In line 6 "equilateral" should read "isosceles". For an earlier proof of $f(3)=8$, see articles by H. Croft [Proc. London Math. Soc. (3) **12** (1962), 400–424; ibid. (3) **13** (1963), 384; MR **27** #5167ab].

80e:20080: **Länger, H.**
In line 6 "$\leqslant$" should read "$=$". In line 8 "$G\in G(2,n)$" should read "a 2^n-element groupoid G belongs to $G(2,n)$".

80e:93132: **Bismut, Jean-Michel**
Augment the review as follows:
"The paper is a detailed account of the optimal control problem for a particular stochastic differential equation. The paper contains material on convex functions, stochastic integrals, stochastic linear differential equations with associated dual equations, and on optimal stochastic integrals."

80f:05025: **Gluhov, A. D.**
The title of the article should read: "A refutation of Ringeisen's conjectures". In line 11 of the review replace "assumed" by "conjectured" and in line 16 "assumptions" by "conjectures".

80f:20025 **Fenchel, Kate**
There is a serious typographical error; the conclusion "$(n,|G|/n)\neq 1$" in the review should read "$(n,|G|/n)=1$". The author proves Frobenius' conjecture in the case $(n,|G|/n)\neq 1$.

80f:42001ab: **Harmonic analysis in Euclidean spaces. Parts 1, 2.**
The paging should read as follows: Part 1, xxvi+460 pp.; Part 2, vii+438 pp.

80f:93100: **Sawaragi, Yoshikazu; Soeda, Takashi; Ōmatu, Shigeru [Omatu, Sigeru]**
The bracketed form of the third author's name should read "[Ohmatsu, Shigeru]".

1980 Midyear Index
On page 28 the columns should be exchanged.

80g:08003: **Aragane, Kenichi; Fujiwara, Tsuyoshi**
The review should have mentioned the paper of W. Taylor [Canad. J. Math. **28** (1976), no. 1, 50–62; MR **53** #5435].

80g:10008: **Wooldridge, Kent**
In the last line "$3-\sqrt{2}$" should read "$3-2\sqrt{2}$".

80g:55017: **Harper, John R.**
In the last line "MR 80d:570016" should read "MR 80d:57001b".

80g:58049: **Pinsky, Mark A.**
The author's main result should read "$\inf_M(G_r/G)\leqslant 2\lambda_1^{1/2}\leqslant\inf_{\theta\in[0,2\pi]}\limsup_{r\to\infty}(G_{rr}/G_r)$".

80g:90103: **Gal, Tomas**
The name of the author of the foreword to this book should read "H.-J. Zimmermann".

80h:04001: **Landraitis, Charles**
The rankings of the representations $\cdots+1+1+1+\omega$ and $\omega^*+1+1+1$ of $\omega^*+\omega$ were given incorrectly in the original review. The ranking of $(\cdots+1+1+1+\omega)$ is $(2,\omega^*)$ and of $\omega^*+1+1+1+\cdots$ is $(2,\omega)$ and both are greater than the minimal ranking $(2,2)$ of $\omega^*+\omega$ obtained from the representation $\omega^*+\omega$. The relation $<'$ defined on p. 405 of the original article is well defined.

80h:04005: **Nosel, Eva**
The assertion that $\alpha\to(\beta_0,\beta_1)^2$ is equivalent to the statement that every graph of type α has either a complete subgraph of type β_0 or an independent subset of type β_1 is indeed correct. (The alleged counterexample proposed in the original review can be shown to have an independent subset of type ω^2.)

80h:10039ab: **Ihara, Yasutaka**
In line −12 "$((X^*/X)/P^*)\in\mathrm{Gal}(X^*/X)$" should read "$((X^*/X)/P^*)\in\mathrm{Gal}(X^*/X)\simeq\Gamma/\Gamma^*$". In line −18 "$(x,x^2)$" should read "$(x,x^q)$".

80h:90008: **Gould, H. W.**
In line −6 "Ph.D. Thesis" should read "M.S. Thesis".

80i:10034ab: **Jacquet, Hervé**
All references to "Hervé" should read "Jacquet". The reference to the paper on "Base Change" should read "[P. Gerardin and J.-P. Labesse, *Automorphic forms, representations and L-functions* (Proc. Sympos. Pure Math., Oregon State Univ., Corvallis, Ore., 1977), Part 2, pp. 115–134, Proc. Sympos. Pure Math., XXXIII, Amer. Math. Soc., Providence, R.I., 1979]". In the penultimate line of the third paragraph from the end "other" should read "outer".

80i:20034: **Gale, D. [Gale, David]; Tamura, T.**
The bracketed form of the first author's name should read "[Gale, Deborah]".

80i:83032: **Horák, M.**
In the heading "no. 1" should read "no. 3".

80i:90032 to 80i:90047
The entire contents, except for the top line, of pages 3705 and 3706 should be exchanged.

80j:03083: **Guaspari, D.**
In the penultimate line of the second paragraph "a presentation" should read "another presentation".

80j:20037: **Skopin, A. I.**
In line 6 "$a\in(T,T)$" should read "$a\in[T,T]$". In line 7 "$a(y,x)$" should read "$[a,[y,x]]$".

80j:30007: **Blambert, Maurice; Parvatham, Rajagopalam**
The second author's name should read "Parvatham, Rajagopalan".

80j:73033: **Valedinskiĭ, V. D.**
In line 4 "$(N=1,2)$" should read "$(N=2,3)$".

80j:76009: **Sattar Gazdar, Abdus**
The author's name should read "Gazdar, Abdus Sattar".

80j:80006: **Engle, W. G.**
The author's name should read "Engel, W. G."

80k:18001: **Rotman, Joseph J.**
Some of the language used in the original review is not standard and some of the statements are a bit misleading.

This book gives a treatment of homological algebra which motivates the subject in terms of its origins in algebraic topology. Tor and Ext are developed and various special kinds of rings and modules are studied, but the author has been very careful throughout to keep the subject in perspective in a number of ways which include, for example, tracing the development of terminology, supplying many examples where homological methods have been used to solve rather down-to-earth problems which are intractable from other points of view, and maintaining a level of generality which, while sufficient for the vast majority of applications, is not so great so as to overwhelm the novice. A great deal of solid, satisfying mathematics is presented. Applications to commutative algebra are particularly abundant, among them unique factorization in regular local rings and the rather recent Quillen-Suslin proof that finitely generated projective modules over a polynomial ring over a field (or principal ideal domain) are free. For pedagogical reasons, there is a separate chapter on group extensions which precedes, by quite a bit, the chapter on cohomology of groups. The book concludes with a reasonably comprehensive but readable treatment of spectral sequences, with numerous applications.

80k:20057: **Aĭenštat, A. Ya. [Aĭzenštat, A. Ja.]**
The unbracketed form of the author's name should read "Aĭzenštat, A. Ya."

80k:53010: **Mikljukov, V. M.**
In the last line "Theorems 2 and 5" should read "Theorems 3 and 5".

80k:53094: **Klimentov, S. B.**
In the title "of the family" should read "of genus".

80k:68008: **Moravec, A.**
81a:68043: **Michálek, J.**
In the heading "no. 1" should read "no. 5".

80m:34020: **Offei, D. N.**
In the heading the journal line should read "Afrika Mat. **2**, no. 1, 3–11 (1980)".

81a:00018: **Derrida, Jacques**
The publisher line should read "Nicolas Hays, York Beach, Maine; distributed by Samuel Weiser, Inc., York Beach, Maine".

81a:60071: **Popov, N. N.**
The title should read "Geometric ergodicity of Markov chains with an arbitrary state space".

81a:93088: **Hadidi, M. T.; Schwartz, C.**
The second author's name should read "Schwartz, S. C."

81b:20019: **Syskin, S. A.**
The following remarks should be appended to the published review:
"The proofs of Theorems 2 and 3 use standard arguments. Let the group G satisfy the conditions of Theorem 1. The author proves that for every 2-local subgroup H of G, $F^*(H)=O_2(H)$, that H is thin (i.e. the Sylow p-subgroups of H are cyclic for $p\neq 2$), and if H is not solvable, then $H/O_2(H)$ is isomorphic to $L_2(p)$, where $p>7$ is a prime, $L_2(2^m)$ or $Sz(2^m)$. He also shows that if the centralizers of all involutions in G are solvable then all 2-local subgroups are solvable and he applies a result of Z. Janko [J. Algebra **21** (1972), 458–517; MR **50** #10052]. If $C(t)$ is not solvable for some involution t in G and T is a Sylow 2-subgroup of G, then the center of the Thompson subgroup $J(T)$ is strongly closed in T. The theorem of D. Goldschmidt [Ann. of Math. (2) **99** (1974), 70–117; MR **49** #407] completes the proof of Theorem 1."

81b:30061: **Kamynin, I. P.**
In lines 6 and 9 "index" should read "exponent".

81b:41051: **Golitschek, M. V.**
The author's name should read "v. Golitschek, M."

81b:53001: **Proceedings of the IV International Colloquium on Differential Geometry**
The publisher line should read "Universidad de Santiago de Compostela, Departamento de Geometria y Topologia, Santiago de Compostela".

81b:58042: **Sjöstrand, J.**
In line 10 "$\Omega\times\dot{R}^N$" should read "$\Omega\times R^N$". In line 18 after "possesses a positivity property" add "in some sense". In line 19 "$I(a,\varphi)=I(b,\psi)$" should read "$I(a,\varphi)=I(b,\psi)\bmod C^\infty$".

81b:60011: **Truhina, Ĭ. P.**
In line −5 "common" should read "simple".

81b:68055: **Ružička, Peter**
In the heading "(Czech and Russian summaries)" should read "(Slovak and Russian summaries)".

81c:10051: **Thurnheer, Peter**
A full proof of the author's generalization of the Wiener-Ikehara theorem appears elsewhere.

81c:14001: **Coste-Roy, M. F.; Coste, M.**
A large portion of the authors' introduction was inadvertently omitted. Replace the text by the following review:
"The real-étale topos of a ring A stands in the same relation to the "classical" étale topos as real-closed fields do to separably closed fields; that is, its points correspond to real strict localizations of A (=ind-étale A-algebras which are Henselian local rings with real-closed residue fields), and the topos itself contains a ring which is the generic real strict localization of A. Unlike strict localizations, real strict localizations of A do not admit any nontrivial A-algebra automorphisms; this prompted G. C. Wraith to conjecture that the real-étale topos should always be spatial (that is, equivalent to the topos of sheaves on a topological space). In an earlier paper [*Topos theoretic methods in geometry*, pp. 37–100, Aarhus Univ., Aarhus, 1979; MR 80m:14002] the authors proved this conjecture in the case when A is the coordinate ring of a real affine curve; here they extend their proof to an arbitrary ring A, using an idea suggested to them by A. Joyal."
Peter T. Johnstone (Cambridge)

81c:16040: **Fox, Thomas F.**
The final sentence should read: "This generalizes the original theory."

81c:32055: **Fujicki, Akiri**
The editors regret that lines 19–23 and lines 30–32 of the second column of the original review appeared incorrectly. Replace lines 19–23 by the following:
"integers modulo a prime p (see also a paper by A. Białynicki-Birula [Bull Acad. Polon. Sci. Sér. Sci. Math. Astronom. Phys. **22** (1974), 1097–1101; MR **53** #13228] for a version covering algebraic actions of the multiplicative group of an algebraically closed field, $\mathbb{Q}$, of arbitrary characteristics on a smooth scheme proper over $\mathbb{Q}$). The".
Replace the final sentence of the first paragraph by:
"The stronger version, among other things, shows that there is an analytic base of $H_*(X(\mathbf{C}^*), \mathbf{Z})$ if and only if there is an analytic base of $H_*(X, \mathbf{Z})$."

81c:46001: **Lindenstrauss, Joram; Tzafriri, Lior**
The reference to Volume 1 should read "[*Vol. I*, Ergebnisse der Mathematik und ihrer Grenzgebiete, 92, Springer-Verlag, Berlin-New York, 1977; MR **58** #17766]".

81c:46031: **Kecs, Wilhelm**
The reviewer wishes to remark that the comment concerning $\mathrm{Supp}(f+g) \subset \mathrm{Supp} f \cup \mathrm{Supp} g$ is due to a misunderstanding and the proof on page 29 is correct as it stands.

81c:47010: **Nordgren, E.; Radjabalipour, M.; Radjavi, H.; Rosenthal, P. [Rosenthal, Peter]**
In line 1 "The first result" should read "The first main result".

81c:65027: **Potra, Florian A.; Pták, Vlastimil**
The reviewer wishes to make the following corrections to the original review: replace "in a complete metric space (X, d)" by "in a Banach space X"; replace "$d(x_n, x^*)$" by "$\|x_n - x^*\|$" and replace "$d(x_n, x^*) \leq \beta(d(x_n, x_{n-1}))$" by "$\|x_n - x^*\| \leq \beta(\|x_n - x_{n-1}\|)$".

81d:32020: **Adkins, Williams A.**
The author's name should read "Adkins, William A."

81d:32035: **Sibony, Nessim; Wong, Pit Mann**
In line 8 "holomorphic function" should read "bounded holomorphic function".

81e:01007: **Hamadanizadeh, Javad**
The title should read "The trigonometric tables of al-Kāshī in his *Zīj-i Khāqānī*".

81e:32002: **Gopala Krishna, J.**
In line 2 "$\Sigma_{k \in \mathbf{Z}_+^n} Z^k$" should read "$\Sigma_{k \in \mathbf{Z}_+^n} a_k Z^k$". In line 7 the equation "$Q(\omega) = Q$" should read "$Q(\omega) = Q'$" in both instances.

81e:41028: **Vjačeslavov, N. S.**
The following phrase was inadvertently omitted from the end of the review: "(b) if α is a rational number, then $L_p R_n(x^\alpha) < c(\alpha, p) n^{1/2p} \exp\{-2\pi\sqrt{\alpha + 1/p}\,\sqrt{n}\}$, $n = 1, 2, \cdots$".

81e:42028: **Skopina, M. A.**
In line 8 "$+O(1/n^2)$" should read "$+O(1/n^r)$". In line 14 "$(1-\varphi(x))/x^2$" should read "$(1-\varphi(x))/x^r$".

81e:53007: **Šifrin, M. A.**
In line 10 "covariant" should read "Pfaffian".

81e:68013: **Brand, Daniel**
In the penultimate sentence "inducting for errors defined" should read "induction hypotheses different".

81e:62015: **Mathai, A. M.; Rathie, P. N.**
In line –2 "μ functions" should read "H functions".

81f:03055: **Matijasevič, Ju. V.**
In the fourth paragraph the reference to MR **58** #5124 should have noted the published erratum to that review, namely, in line 2 of the review, "polynomials" should read "exponential polynomials".

81f:30034: **Kaliničenko, L. I.**
In line 5 "$F^{\langle k \rangle}(z)$" should read "$F^{\langle k \rangle}(\lambda_k)$".

81f:35034: **Ezin, J. P.**
In the heading the journal line should read "Afrika Mat. **2**, no. 1, 71–92 (1980)".

81f:65033: **Jackson, David D.**
In line 8 of the second column "$x_h = H_y$" should read "$x_h = Hy$".

81g:10049: **Šidlovskiĭ, A. B.**
The last sentence should read:
"The estimations of the measures for subsets of E-functions in the case when the initial finite set of E-functions is algebraically independent over $\mathbf{C}(z)$ are indicated."

81g:58017: **McKean, H. P.**
The reviewer of this article is G. Wilson (Oxford).

81g:60070ab: **Lotov, V. I.**
In lines 2–3 delete the sentence "It is assumed that $E[\lambda^{\xi_1}; \xi_1 > 0]$

is a rational function". In the last line "ibid. **24** (1979), no. 4, 876–881 (1980)" should read "ibid. **24** (1979), no. 4, 869–876 (1980)".

81g:73007: **McNiven, Hugh D.; Mengi, Yalcin**
Delete "$=0$" at the end of equation (3).

81i:03070: **Gončarov, S. S.**
In lines 2, 3 and 8 "lattice" should read "structure". In the last line the paging of the English translation should read "411–414".

81i:68027: **Schmidt, Gunther**
In line 4 "v-incidence" should read "$\vee$-incidence". In line 10 "$\mathfrak{B}_{v,R}=\{S;\ S$ is v-incident with $R\}$" should read "$\mathfrak{B}_{\vee,R}=\{S;\ S$ is $\vee$-incident with $R\}$".

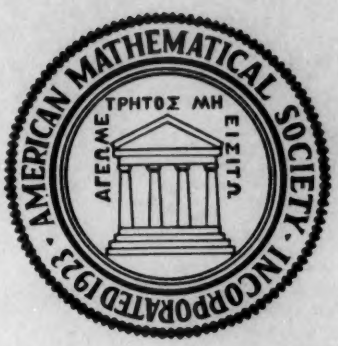
81j:26010: **Longinetti, Marco**
In line 4 "quasiconvexity" should read "quasiconcavity".

81j:60012: **Mihaĭlov, V. G.**
In line −2 "$\mathrm{Var}\,\mu_0$" should read "$D\mu_0$".

81j:60020: **Januskjavicjus, R. V. [Januškevičius, R. V.]**
In line 2 "$\delta^2<+\infty$" should read "$\sigma^2<+\infty$". In line 5 "$(0,\delta)$" should read "$(0,\sigma)$".

81k:03016: **Bergstra, Jan; Klop, Jan Willem**
In line −12 "$BT(M)$ is finite, where $BT(M)$ is the Bohm tree of a term M" should read "$BT(M\circ N)$ is finite, where $BT(P)$ is the Böhm-tree of a term P".

81k:81047: **Garber, W. D.**
In line 4 "there is no mass gap" should read "there is a mass gap".



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